HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, OCTOBER* 19, 1883.

CONTENTS OF No. 28.

	PAGE
Notes by the Way	33
Original Essays:—	
Type-Writers and Writer's Cramp. II.	34
Medico-Electrical Appliances and their Employment as Aids to Health. IX. By W. L. Carpenter, B.A., B.Sc., &c.	35
Personal Health:—	
Deodorants and Disinfectants	37
The Family Circle:—	
Hygiene in Relation to Education and Youth. I. By Edward H. Riches, LL.D., F.R.A.S.	38
St. John Ambulance Association	40
Healthy Houses:—	
The Unsanitary Homes of the Rich. II. By C. F. Wingate.	40
Our Bookshelf:—	
Beauty and Health	41
A Useful Cookery Book	42
A Guide to Health Resorts	43
Sanitary Appliances, &c.	43
Our Letter-Box:—	
Letters to the Editor: Choice of Site for Dwelling — Dress Reform, &c.	44
Queries and Answers	45

Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

THE question of "over-strain" in education seems destined to acquire perennial importance in the eyes of health-reformers. The medical journals have been discussing the question at length, and educationists seem to be fully alive to the import of the topic. A recent contribution to the subject by Mr. W. Lant Carpenter, one of our contributors, has just been laid before us. In an article of much power, contributed by Mr. Carpenter to the *Modern Review* for July of the present year, he lays before the public the doctrine that in science-teaching in schools there is a remedy for over-strain. This has all along been our own opinion. If we can take boys and girls off the jog-trot of educational routine by interesting them in the great world in which they live—its matter and force, its birds, beasts, and flowers, its rocks and fossils—we impart to their studies a new zest, and open before them a universe that must possess an unending charm throughout life for those who know something of its ways and works.

\+ \+ \+

NOT so long ago people were inclined to regard the demand that science should be represented in education, as tantamount to the exclusion of classics and of other branches. But both sides, scientists and teachers, have calmed down. There are few, if any, teachers now-a-days who do not profess some branch or other of science, and there are few who do not teach science in their schools. After all, science is the great civiliser of humanity, and it claims this place in education because its aims are so wide and its practical applications to human life endless. How science in education must in time affect national health becomes clear when we reflect that if children are taught the elements of physiology and the laws of health in schools, they will enter life prepared to recognise and avoid the sanitary pitfalls into which so many of their elders unconsciously fall.

\+ \+ \+

As a relief in education, the teaching of science comes prominently to the front. Science-teaching in its proper sense is the teaching children to use eyes and ears and fingers; to think for themselves, to find out plain facts and truths to which the teaching leads, and to form rational ideas about the world and themselves. Those who wish to know how this may be accomplished should read Mr. Carpenter's paper. Therein we find quoted some ludicrous examples of the baldness of ideas which children are too often left to possess about the universe. Of forty-eight children questioned at Boston (U.S.A.), twenty believed sun, moon, or stars to live; fifteen thought a doll, and sixteen thought flowers, would suffer pain if burned. Of a large number questioned, forty-eight per cent. imagined that the sun at night "goes, or rolls, or flies, is blown, or walks, or God pulls it up higher out of sight. He takes it to heaven, and perhaps puts it to bed, or even takes off its clothes and puts them on again in the morning; or, again, it lies under the trees where the angels mind it." The moon "comes round when people forget to light lamps;" and God "lights the stars with matches, and blows them out and opens the door and calls them in in the morning." These are samples of the ideas of school children, and it is not too much to say that what was found at Boston may be paralleled in any British town. Truly in the matter of real knowledge and health, it is high time parents began to demand the kindly teachings of science for their little ones, and for the growth and culture of their minds in the knowledge of the fair world around.

\+ \+ \+

THERE is, however, another point immediately connected with the health of the young, to which we must draw attention. There is a crying need in school-life for a regular system of well-ordered physical exercises—such as have been established under the auspices of the London School Board. Parents to-day seem to associate "gymnastics" and "exercise" with acrobatic feats. They do not recognise that a certain "physical training" is really part and parcel of the daily life of all—as when we walk or run. Still less do they seem to appreciate the fact that many a child grows up weakly or even deformed from want of common attention to the development of its chest and frame generally, and from lack of such exercise as might be given at schools with the utmost ease. Sweden is far ahead of us in this respect with its system of "physical education." When boys and girls all are made to look forward (as they do with delight wherever they have such instruction) to the exercise class as a part of their ordinary education, we shall hear less of educational overstrain, because we shall give them healthier bodies, and be able thus also to enlarge the sphere of the educationist himself.

\+ \+ \+

FOR the information of those of our London readers who feel interested in knowing where a carefully conducted class for teaching physical exercises to girls is held, we may add that Miss Marian Bristed holds a gymnastic practice every Wednesday afternoon at half-past three o'clock, in the Lecture Hall of the Presbyterian Church, Camden-road. The system there taught should be seen by all who desire the encouragement of sound frames in the younger members of the gentler sex.

\+ \+ \+

PROFESSOR GAIRDNER, of Glasgow, sends us a kind note wherein he points out that the case of the German girl mentioned in our "Notes by the Way," in No. 25, as having bitten off and swallowed the ends of her hairs, is by no means novel. The Professor points out the interesting fact that a similar case was recorded by Dr. Ritchie, of Glasgow, in the *Edinburgh Medical Journal*, for July,

1849, whilst other instances of this curious habit of hair-swallowing are also known. The Glasgow case was fatal, while the German case, in which the mass of hair was removed from the stomach by an operation, must be added to the list of surgical successes. To this latter phase of the case we are glad to direct attention.

\+ \+ \+

It will be news to most people, we dare say, that there exists a monthly periodical (now in its 5th number), called *The Spiritual Record*, and devoted to the advocacy of spiritualism. In the number of this journal for the current month, Health is favoured with a criticism. On the principle of feeling thankful for small mercies, we feel grateful to the editor of *The Spiritual Record* for his demonstration of the depths of imbecility to which the human mind may occasionally wander. In criticising our article on the Belgian "stigmatie," Louise Lateau, the editor of this sapient periodical elects to believe—as we read his paragraph—that the story of the girl's fasting for eleven years was credible. He also adds that our study of the case illustrates "the golden rule of denying every fact you cannot account for." We suspect the "spiritualists" have so often felt the force of this rule and its application by the common sense of mankind, as applied to their practices and beliefs, that they seek to bring it somewhat into derision. But the man who thinks Louise Lateau's case lies outside the pale of scientific explanation, and dwells in the clouds (and fogs) of spiritualism, had perhaps better be left in the cheerful company of such a belief. On the theory of the editor of *The Spiritual Record*, every hysterical girl, and possibly every lunatic also, must appeal to his special "ism" for the true explanation of their affection. Medical science does not like wags of *The Spiritual Record* and similar publications, but we believe the dislike is perfectly mutual.

\+ \+ \+

Here is a nice cheerful passage from the *Record*. A bereaved widower came to a spiritualistic *séance* and received what the *Record* terms "an unmistakable unquestionably genuine message from his wife." The inference reasonable people are asked to draw from this recital is, that spiritualism is of great service in bringing hope, joy, &c., to millions. But there is a charming simplicity in the *Record's* assumption that humanity at large will accept its mere statement of the message from the spirit-wife, as a proof that such an event actually occurred. It is clear, as we have already remarked, that spiritualists must have all faith—and no science.

\+ \+ \+

The latest novelty we have heard of is the manufacture of "artificial eggs." These productions are said to be turned out in America at the rate of 1,000 per hour. The "yolks" consist of a paste formed of starch and other materials. The "whites" are made of albumen—chemically, the same as white of egg. The inner skin is a gelatine film, and the shell is formed of plaster of Paris. The "eggs" are frozen in the manufacture, and can thus be readily and easily made. In point of taste, the artificial eggs are said to equal the genuine articles; but a contemporary adds the sage remark that "even the most assiduous hen had failed to produce chicks from these compounds."

Dr. Nichols' Penny Vegetarian Cookery-Book.—Every household should possess this marvel of cheapness. Free for 1½d.—Nichols & Co., 23, Oxford-street, London, W.—[Advt.]

Original Essays

"Life is not to live, but to be well."—*Martial.*

TYPE-WRITERS AND WRITER'S CRAMP.

SECOND PAPER.

The rate of speed at which operators can work the type-writer varies, of course, with the machine, and with the amount of experience and practice the operator has had in working it. In our experience we have found type-writers to vary greatly in their performances, but with even ordinary practice from 25 to 40 words per minute are readily attained. In one case we saw 50 words per minute printed; but, on good authority, it is alleged that from 60 to 70, or even 75 words may be printed in that space of time. Such facility can only be attained, however, after long practice; but, once acquired, we believe the power of rapidly manipulating this ingenious instrument is easily maintained.

Mr. Brudenell Carter, F.R.C.S., Ophthalmic Surgeon to St. George's Hospital, in his treatise on "Eyesight, Good and Bad," has the following remarks on the relationship between the use of the type-writer and the preservation of the eyesight:—

"Even in learning the use of the instrument, when the letters have to be looked for one by one until the fingers become sufficiently familiar with their several positions to touch them instinctively, the characters are so large that there is no appreciable strain upon the vision; and, when once dexterity is attained, the eyes can scarcely be said to be used at all. My own eyes have never occasioned me any discomfort; and my own use of the type-writer rests upon quite different grounds; but yet my experience of it enables me to recommend it very strongly to all persons who, having to write much, are made conscious by the exercise that they have eyes. For the short-sighted it is especially valuable, because there can never be any inducement to stoop over it, so that a great snare to them in writing is altogether set aside. Next only in advantage to the facilities it affords for writing are those which it affords for reading what has been written; for this is printed in perfectly spaced lines, at regular, and, if desired at rather wide intervals, in block capitals of perfect clearness. The author who wishes to glance back over his MS. is almost as much helped as he who only wishes to produce it; and the labour of seeing, in every stage of the process, is either abolished or reduced to a minimum. So much is this the case that I am informed, although I cannot speak on this point from personal knowledge, that its use is readily acquired by the blind.

"The other advantages of the machine, those for which chiefly I personally value and employ it, are worthy of a moment's consideration. Its work in my hands is about twice as rapid as that of a pen; and became so after a few weeks of practice. A new machine is frequently a little stiff, as with machines of every kind; but, when once the type-writer has been worked into running order, the keys move as easily as those of a piano, and the effort of tapping them, being accomplished by the finger tips, and being divided between two or three fingers of each hand, is unfelt, however long it may be continued. I have worked the machine for eight consecutive hours without more than ten minutes' interruption, and at the end of that time my hands were not conscious of the least fatigue. Every writer is aware that the same thing cannot be said with regard to the pen; for that the effort of holding it, which is performed almost exclusively by the muscles of the ball

of the thumb, opposed by those of the fore and ring fingers, soon becomes very fatiguing, and, in professed copyists, not seldom produces an affliction known as 'scrivener's cramp,' which sometimes passes on to complete paralysis of the muscles which are concerned. Before I possessed a type-writer my own muscles were often so tired by writing that I had seriously thought of abandoning the practice, lest the strain thrown upon them might in time impair the qualities of the hand as an instrument for surgical purposes; but since I have had a type-writer, these feelings of fatigue are unknown, not only on account of the division of labour between several fingers, but also because the work is not done by the small muscles of the fingers at all, but by the large ones of the forearm, which are capable of much greater and more sustained exertion.

"Of less importance, but still not to be left out of account, are the beauty and clearness of the MS. which the instrument produces. All authors are aware that it is impossible to put the finishing touches to written composition until it appears in the form of a proof, because the comparative illegibility of even the best handwriting prevents that looking forward which is essential to complete correction. Hence it follows that the cost of corrections forms an important item in the cost of publication. With a type-writer this difficulty no longer exists. The result which it produces is clearer and more legible than any ordinary proof, and every correction can be made by interlineation either with the machine itself or with a pen, before the MS. is sent to the printer.

"The fair copy of the present treatise, for example, was produced by my own hands in an aggregate of about fifty hours, and almost the only faults which required correction in the proof were the few accidents from wrong types which had been overlooked by the reader. The original setting-up was in the pages as they now appear, instead of in slips as usual; and the total cost of a type-writer would be more than repaid to many authors by the saving which it would effect in the production of even a single volume.

"Like other machines, the type-writer did not spring full-grown from the brain of its inventor, but has only gradually been brought to its present degree of excellence. Since I first obtained one, several improvements of detail have been introduced, and one of the latest forms is constructed to print either capitals or small letters at the will of the operator, instead of capitals only. Another form is fitted with a plate-glass cover, which encloses the whole of the working parts, and intercepts all sound. Without this cover some tapping noise, comparable to that of some of the forms of sewing-machine, is an inseparable accompaniment of the instrument. The glass case is said to have another advantage, in that it prevents the inking-ribbon, with which the machine is supplied, from being readily influenced by changes in the hygrometric condition of the atmosphere. Without this protection the ribbon is soon affected either by dryness or moisture; and hence, for continuous work in changeable weather, it is well to keep two ribbons, one somewhat more saturated than the other.

"Upon all the above grounds, and after four years of daily personal use, I most strongly recommend the type-writer to all persons who write for considerable periods of time, more especially to the short-sighted, or to those who have any kind of trouble about their eyes. Even apart from such trouble, I think no systematic writer should be without it unless he be one of those curiously constituted creatures to whom the caprice of nature has denied the gift of mechanical aptitude, even in its most rudimentary form. Those who possess two left hands, and whose fingers are all thumbs, had better, perhaps, leave the type-writer alone; but for all others it is an inexpressible relief either for weary hands or for weary eyes, and its prime cost will be speedily repaid by the resulting economy both of money and of time. The only kind of writing to which it is inapplicable is for making entries in books, and even this difficulty has to a great extent been overcome in America by the practice of using separate sheets, which are preserved in a portfolio and then bound in a volume. The records of the Ophthalmic department of St. George's Hospital were for some time taken by a type-writer and preserved in this manner.

"In using the type-writer it is quite possible to keep the shoulders square and to sit erect; but nearly all persons who write with a pen at a low table or desk contract a habit of stooping, which is in many ways prejudicial to them. It not only contracts the chest so as to interfere with the freedom of respiration, and thus with the due aëration of the blood, but it also tends to produce congestion of the head generally and of the eyes in particular."

(To be continued.)

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

MEDICO-ELECTRICAL APPLIANCES AND THEIR EMPLOYMENT AS AIDS TO HEALTH.

By Wm. Lant Carpenter, B.A., B.Sc.

NINTH (AND LAST) PAPER.

In the last article of this series we gave our readers some account of Professor McKendrick's able lecture and demonstration upon "Galvani and Animal Electricity," delivered before the British Association at Southport. During the meeting, also, a very interesting paper was read in the Biological section, by Dr. W. H. Stone (of St. Thomas's Hospital) upon the "Electrical Resistance of the Human Body." The author described at some length the means which he adopted to reduce the skin-resistance to a minimum (chiefly by prolonged soaking in water, as pointed out in the preceding article), and also his method of obtaining good contacts with the source of electricity and with the measuring instruments. These he got by wrapping the limbs firstly with a surgical bandage dipped in salt and water, and then covering this with a strip of thin sheet-lead, wound over the limbs just like a bandage. He believed that this entirely eliminated the skin-resistance, because, in the case of a patient who died, he found that the body-resistance measured in this way was the same as when the electrodes employed were of wire, and pushed up 3 inches into the flesh, so as to ensure perfect contact underneath the skin. The mode of making the observation was minutely described, and the standard circuit usually taken in the body was stated to be from the wrist to the ankle, a distance which could be readily measured. It appeared that on this circuit the normal resistance of the body was, in electrical language, about 1,030 Ohms., and that it did not vary much with the size of the individual—the Hungarian giant, for example, giving nearly the same result as a very small man. In disease, however, the resistance was greatly modified. A case of half-paralysis (*hemiplegia*) was mentioned in which it was 730 Ohms less. In the case of a man dying from renal disease, the body-resistance diminished as the temperature fell, being at one time only half the normal, and temporarily increased again when the patient rallied

slightly. After death, however, the resistance again rose to the normal. In the discussion which followed, several gentlemen took part, including Dr. Carpenter, Prof. Ray Lankester (President of the Section), and the present writer. Dr. Stone, in reply, expressed a decided opinion that the resistance of tissue increased with its vitality, remarking that it was well known that after somatic death (*i.e.*, the death of the body as a whole), the absolute vitality of certain tissues was largely increased. In this connection, it may be useful to recall the point upon which Prof. McKendrick insisted, viz., that the electrical condition of tissue was to be regarded as the physical expression of the chemical changes that occurred in it; these chemical changes being the result of the activity of the muscle itself. It appears, therefore, that all these various changes are closely connected, and that these phenomena are another, and a remarkable, instance of what used to be called the Correlation of Force, but is now rather more often spoken of under the name of Conservation of Energy.

The ends which the writer had in view at the commencement of this series of articles have now been attained. He was anxious, on the one hand, to warn the public against the large amount of utterly inefficient trash which was largely sold as *bonâ-fide* medico-electric appliances, the sale of which was promoted in every possible way by an enormous expenditure in advertising in public prints, as well as by other and more objectionable modes; on the other hand, he was anxious not to convey the impression that there were no genuine and efficient appliances to be obtained. An instance of the latter class has just been brought under his notice, in the form of a new electric hair and flesh brush, much more powerful than that described in the fourth paper of this series. These brushes have been patented by Mr. J. Norman Aronson, and are being manufactured by the celebrated firm of Elliott Bros., Strand, London, whose name is a guarantee for electrical work of the highest class. The back of the brush contains a small induction-coil, which is excited by a small sealed Leclanché battery, surrounded by metal, and held in the hand as one of the electrodes; it is connected by a flexible cord, containing many very fine copper wires with the brush, and on applying the brush to any part of the body, the rapidly alternating current produced by the induction coil passes between that point and the hand. The brushes are provided with a regulator for increasing or diminishing the strength of the current, and with an ingenious "push" for starting or stopping it altogether. In a very few weeks, these brushes will be offered for sale; it must be remembered that the current given by them is induced, intermittent, and alternate, not a continuous flow, such as is produced by any battery in which the electrical energy is derived directly from chemical action. What the charac teristic differences between the two kinds of current are has been already pointed out in previous articles of this series. An ingenious application of the continuous current to dental purposes has just been made by Dr. Wedgwood, who has contrived an arrangement, to be used either with or without artificial teeth, in which what is practically a minute battery composed of pairs of two metals in very small plates is worn inside the mouth. The saliva acts as an exciting fluid, and a weak continuous current, localised in the palate and gums, is thus set up.

There are many ways in which electrical appliances, other than medical ones, may afford valuable "aids to health"—such, for example, as the use of the electric light in hot and crowded rooms, or, indeed, in any apartments where ventilation is from any cause inefficient; in this case, as neither heat nor noxious products of combustion are produced, the sanitary advantages are obvious. Another example is the use of electrical energy as a motive power, for the performance of various kinds of domestic operations at present demanding the expenditure of vital energy. The treatment of these subjects, however, is beyond the scope of the present series of articles, and whether it shall be attempted at all in these columns is at present an open question.

It is perhaps scarcely too much to say that the present condition of what is often called "Medical Electricity" is an eminently unsatisfactory one. On the one hand, the medical men who occasionally resort to it as a therapeutic agent are too often quite ignorant of the simplest laws of electrical science, which, as we have pointed out, are neither more complex nor less well known than those of other branches of physics; and on the other hand, the professed electrician, who is really competent to deal with that side of the question, is usually unacquainted with the complex processes occurring in the human organism, even in their normal condition, and *à fortiori* is still less able to deal with the abnormal phenomena of disease. There is still a wide field open for research in this branch of the medical profession, and the true direction in which this should advance is seen in the attempts which are now for the first time (*i.e.* within the last year or two) being made to apply to the human body, under carefully observed conditions, those instruments of precision which the recent rapid development of the practical application of electricity has placed in our hands. No opportunity has been lost in the present series of articles of pointing out the great influence of "faith" (*i.e.*, of attention fixed on an object with the confident expectation of cure) upon the use of the many appliances before the public, faith which, there is no doubt, has had by far the largest share in most cases of alleged cure; hence another object which the writer has had in view has been to point out clearly the scientific principles upon which such medico-electric appliances should be constructed, and to explain at length some simple but reliable tests for their electrical efficiency. How far he has succeeded in this, he leaves it to his readers to judge. In the course of the publication of the articles, he has received, privately as well as publicly, much spontaneous testimony to the great value of their general drift both from electricians and from medical men; and in now taking leave of his readers, he only desires to add that he will be always glad in the future to attend to any letters upon the subject-matter of this series of articles which may be sent to him, care of the Editor of HEALTH.

SWEATING.—Dr. H. Currie writes in the *Australian Medical Journal*:—For excessive sweating, bathe the body, a small surface at a time, with a wet sponge with the following lotion:—

Alcohol	one ounce
Quiniæ Sulph.....	one drachm.

A lotion to be made.

SANITARY INSPECTIONS.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—THE SANITARY ENGINEERING CO., 115, Victoria-street, Westminster, S.W.—[ADVT.]

HAMPSTEAD.—High and healthy position, near the Heath. STANFIELD HOUSE SCHOOL for sons of gentlemen. Home comforts; and the health of pupils carefully studied. Individual teaching. Principal: Mr. W. R. MARSHALL (several years' experience), assisted by eminent masters. Prospectus on application.—[ADVT.]

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

DEODORANTS AND DISINFECTANTS.

Our correspondent writes from Florence, under date 3rd October :—

Referring again to this most important subject, in the discussion of which you have allowed me to enter (*Vide* Health, Vol. 1. p. 391), I am about to ask for a little more space.

Your compositors have made an error in printing "the late Dr. Carr," instead of "the late Dr. Farr," whose life (it may be almost superfluous to record) was a most useful one in the cause of sanitation, by his statistical labours at the Registrar-General's Office. One of these was on the subject about which I quoted in your journal.

I fear that I have not made myself understood in the matters on which I treated, from the note which you place under my communication, and wherein you say "Clay cannot 'disinfect'; and whilst we agree with our correspondent in many of his remarks, the value of 'disinfection' is, we think, too much neglected in his argument." The "Hospital Physician" (at page 56, of Health) defines disinfection to be "the chief means we possess for *preventing the spreading* of infectious diseases." But it appears to me better to *prevent the generation* of disease in the first instance, which was the chief object I had in view. For if disease be not *generated*, there can exist no power of *spreading*.

Poor-Law Commissioners (even in a country where poetry is so "racy of the soil" as in Ireland) are not generally considered as much more tending to the cultivation of the "tuneful nine" than a Blue-book; yet I remember that about twelve years ago, when there was an alarm in the sister island in dread of the re-visit of cholera, the guardians of the different Poor-Law Boards throughout the country were furnished—it was said from their head-quarters in Dublin—with a lengthy series of verses, scarcely meriting the title of poetry in an epic or idyllic sense, and though deficient in grammar and rhythm, eminently practical. They were under the heading of "Precautionary Hints on the Threatened Approach of Cholera." There were twenty-five verses, divided into two parts, No. 1 being about "The Skin," and No. 2 "The Blood." I am about to quote two of the last verses, and one of these (it may be almost inferred) seems prophetic of the appearance of your journal.

> Then show that you value your blood and your skin;
> Remove every nuisance without or within;
> Obey all the laws that are made, to that end,
> And regard the Inspector of Health as your friend.
>
> If your house have a taint, employ in good time
> Either carbolic acid or chlorate of lime;
> But of *all disinfectants the earth is the best;*
> *Smells covered by earth are for ever at rest.*

In a chemical point of view, perhaps, the opinions of the Poor Law Commissioners may *not* be considered orthodox in the definition of a disinfectant; but I am about to relate what I can adduce in corroboration of the opinion as to the effectual "squelching out"—to use an expressive Yankeeism—of bad smells and their infectious influence by means of dried earth.

Fifteen years ago I resided for some considerable time, say close on three years, in one of the large cities of Peru. There, amongst a population of nearly thirty thousand people, there were not half a dozen *cabinets d'aisance* in the town. Water had to be brought from a distance, and was very expensive. Then I first commenced the earth system, which there was no difficulty in carrying out, for, as it never rains on that part of the Pacific coast, any amount of dry earth can be had everywhere. In the city, the excretory matters were taken away from the houses of those who could afford to pay for it by barrels in carts, each barrel having a large funnel for the bung-hole. This service was done by the servants of a company called "Abromicos," who derived some privileges from the municipality for the work. As it was generally carried out at about mid-day, and often when the tropical sun was in full blaze, it may be inferred that little of the rose or violet could be imagined in walking through these streets. Those who could not afford to pay for this transport, being the larger part of the population, had to throw waste matters into the streets or the *Azequias*, where the principal parts were soon disposed of by Turkey-buzzards—appropriately styled by Swainson as "the scavengers of Nature." Along the centres of the chief streets were these *Azequias*—channels of about 1 ft. in depth and 2 ft. wide, into which the filth and garbage of all kinds were thrown, to dribble away as they might, or to rot and fester into putrescence, and consequent pestilence.

One very narrow street, leading from a main thoroughfare, had always a heavy disagreeable odour from it when I was passing that way—and this was sensible to every person coming from a purer air. On examining, I found that at the other end of it, which terminated in the camp, was a cesspool, permanently open and uncovered—into which the inhabitants of the street made the custom of daily emptying the receptacles of their excreta during the previous night. Whether it had ever been cleaned out since the days of Pizarro, I could not ascertain. But on further inquiry at the municipal offices I was informed that this street was *the most expensive* (to the Corporation) of the city's tenements, that the doctor was always there, that its cost for coffins was very remarkable, and that, in fact, it was the irrepressible abiding-place of measles, typhoid, diarrhœa, cholera, and various other morbid conditions. By the registrar's book, which was courteously submitted to me, I found that the mortality of children under one year in this street (which was one of the longest and narrowest in the town) was invariably from 45 to 50 per cent., and all the infant population under five years went off at the rate of 60 to 65 per cent. per annum. In this you will see that it exceeded the death-rate at Northampton from foul air, mentioned in Mr. Chadwick's lecture in that city "On the Sanitation of a County," delivered on Aug. 15, 1876. Of what use, may I ask, would disinfectants of the pharmaceutical kind have been here, so long as the cesspool existed? This was the question that at once came to my mind. But I had enough of experience in the matter of earth to induce me to recommend it to the Corporation—at the same time pointing out what an economy, apart from higher motives, it would be to stop this state of things. I was met by the usual stereotyped answer of municipal bodies —want of funds." And so, with the aid of a friend, I managed to get half-a-dozen cartloads of dry clay brought down and thrown into the cesspool, that it might absorb, coalesce, and amalgamate with the contents. Enough clay

Pownceby's Pure Wines and Brandies, as analysed, and especially selected to suit medicinal purposes, may be obtained in small quantities at wholesale prices. Free delivery within fifty miles. Circular and price current by post from Pownceby & Co., Wine and Brandy Importers, 183, Oxford-street, London, W.—[Advt.]

was put in to have about a foot of stratum over the top. Then I tried to persuade the officials of the place to have a new cesspool made, and keep it wholesome by putting in some dry clay from time to time. But this they declined to promise, though giving a sort of doubtful hope that they would do so, for they could not avoid seeing that the effect was almost magical. In a few hours all bad smell had departed, whilst within the following and many succeeding weeks the death-rate sensibly diminished. But the people, as well as the authorities, are so suspicious of anything introduced by a foreigner, that they soon fell back into their dirty ways. The Great Revolution of 1872, soon followed by the war with Chili, extinguished all ideas of sanitation, and no other results ensued.

It is for such cities as that I mention in Peru, where there is little water and much dry earth, that the closets I have spoken of are appropriate. They are equally applicable to this city of Florence, on account of its scarcity of water in the summer-time and the profusion of argillaceous clay about its roads. Yet, "the city of flowers and flower of cities," though spoken of by me as being appropriate for such an experiment, is so clean a town as not at all to deserve the vilifications made against it only a month ago by a London newspaper.

I appreciate the value of disinfectants as much as any one can do; but it seems to me rather a dangerous thing to operate with those recommended by "An Hospital Physician," unless it is done by a medical practitioner or by a chemist.* Indeed, he himself speaks of the dangers that may result from carelessness (page 107 HEALTH), and therefore I am not enthusiastic about having a disinfecting pharmacy, with poisons in it, as a part of family furniture. Moreover, the poor, by whom disinfectants are most likely to be needed, cannot afford to buy such things—and even if they did, not one in a thousand knows how to manipulate them. Even the so-called best of these (though upon that point I have not full faith)—namely, carbolic acid—may prove very hurtful if not properly diluted. In Italy it is called fenic acid—derived, I see by the Italian Pharmacopœia, from the Greek *phaino*, signifying bright or glittering.

Everyone can use without danger what my forty years' experience has taught me to be the best of disinfectants, namely, Bailey's Sulphur Pastilles, lime in its different combinations of bisulphate, chlorate, and carbonate, and earth. The carbonate, or common lime, of which the poor man can buy a few pennyworth, is one of the best. I am glad to see that the "Hospital Physician" speaks so favourably (HEALTH, p. 89) of sulphur, which I have always found to be amongst the most powerful and successful of disinfectants. But the plan he describes of burning the solid sulphur in an iron dish or tray, and setting it alight by means of alcohol, is the same as was done in England, Ireland, and Scotland—substituting a red-hot coal for alcohol—when the cholera made its first appearance in 1831 or 1832. The sulphur pastilles are so much more convenient, so easily lighted with a match, and contain so much more sulphurous acid gas to be eliminated, that they are far preferable. They destroy all the infusoria or molecules of the air wherein they are burned. I have also known, more than twenty years ago, some cases of continued typhoid, in Liverpool, to have been cured by their being burned three or four times a day contiguous to the sick chamber, without the administration of a single dose of medicine.

* Our correspondent neglects to remember that the disinfecting directions he speaks of were specially written as instructions for the treatment of fever cases in our homes.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

HYGIENE IN RELATION TO EDUCATION AND YOUTH.

By Edward H. Riches, LL.D., F.R.A.S.

FIRST PAPER.

The true principles of hygiene, if properly applied, may, in the words of the late Dr. Parkes (so well remembered for his labours in the cause of sanitation), be said to render "growth more perfect, decay less rapid, life more vigorous, and death more remote." Certainly a sequence of advantageous events worth striving after! We are witnessing in our day vast strides in scientific discovery, but if these strides are not to lead us into "fresh fields and pastures green," where life would become less burdensome to millions of disease-stricken mortals, then we may justly assume that either the error rests with our inability to apply those scientific principles which may be taken as a safe enough guide, or else an unpardonable lethargy is ours, which might, with but little trouble, be shaken off. The Duke of Albany a short time since remarked, in reference to those scientific principles which seem of late years to have become patent to all who have given thought and research to scientific study, that hygiene was "the application of scientific principles to the varying conditions under which we are called upon to live." And in this he said well; but, in applying our knowledge of hygiene generally, surely it will be well that we bear in mind the truth of the not often-quoted Chinese proverb, that "to make sure of well-developed older growths see well to the saplings." There is a truth underlying this proverb which is certainly applicable to our present purpose—namely, of dealing concisely and definitely with hygiene in relation to the young, their education, and the schools where our young of both sexes are located. Our remarks, although intended to apply with special force to the great number of private schools throughout the country, may, and it will be found do, apply equally in some cases where public schools are concerned. In this age of education, when, for the most part, parents are quite satisfied if the periodical report of their children at school be satisfactory as regards their mental progress, it may be well to emphasise the fact, that *a something else* than mere mental culture should be seen after; and that, where separation of mental education from an education of the body is effected, a piece of ignorant cruelty to the child too often ensues. Not that the boy or girl at school is expected either to care for or know anything about hygiene (except in a certain elementary form which should in all cases be judiciously taught), but the parent in deciding on a school should look to something more than the pleasing picture of the house and grounds at the head of the well-worded prospectus, which, by the way, in most cases draws attention to the fact that "the air of the vicinity is highly salubrious," and so forth. But this is not all that should be required. In all cases a personal inspection of the school where the child is to be left should be made; and it would be but little trouble to ascertain whether most of the necessary conditions of sanitation and hygienic principles we would here enforce are present or absent. For is not education the means by which boys and girls are to be developed into

the men and women who, in their turn, will take their part in adding to the world's population? And if this be so (and physical as well as mental conditions undoubtedly enter into this evolving of the "sapling" into the "older growth"), surely to neglect the one for the sake of the other is a grievous error. Let us, then, consider hygiene as that which applies to the education of the body; but, remembering how the mind reacts on the body of old and young alike, we must make the mental and physical education entirely inseparable.

Bodily exercise for boys and girls, after a close application to the desk, is an all-important matter, but extremes must be avoided in all cases. It is not every boy who can do the amount of strong exercise, either at running, jumping, football, cricket, &c., that others are capable of doing. There are cases where a boy may try to exercise himself as strongly as his companions, but, perhaps owing to some physical deficiency or disease, it is highly important that he should be checked. It is not every girl who is capable of the same amount of calisthenic exercises as others. A constant watch should be kept upon the young out of school; in fact, while education is going forward, if that education is to be such in its *comprehensive* sense, it is only when pupils are asleep in their beds that the eye of a teacher should be withheld. We do not say that the young are always to feel that they are being watched; not so, for that would be a profound error, and a child would thereby never have the chance of being its natural self. Nor, in this taking care of the young, must they be "coddled" and spoilt, and be told upon every occasion that "this must not be eaten," and "that must not be done," and so on. A child's nervous temperament may thereby be greatly weakened, and, instead of a mental vigour running parallel with a robustness of body, the very reverse may ensue.

In a certain sense, education is an art and not a science; and thus it is that it should be applied judiciously, and not by means of any hard-and-fast rules of action. It was said somewhere, that all is perfect and good as it comes from the hand of God, its Maker, but it degenerates in the hand of man. We would here quote what Mons. Raoul said in reference to the hygienic conditions of schools in general:—"Health is the last preoccupation of the schoolmaster at present. Narrow rooms—low, damp, deprived of sun, saturated with bad odours, sometimes hot and close, or subject to draughts; flat desks, seats too high or too low, clothing tight round the neck, the waist, or the legs; positions dangerous for the lungs, the stomach, and the circulation, the spinal column, and the brain; restraint in one position too long, brilliant colours, dazzling reflections of light either in quantity or direction—these are the conditions in which *the great majority* of children are brought up in schools and colleges, and even under the roofs of private families." We have seen it stated that the result of all this is, that the mortality of children up to ten years of age is 39 per cent. in Savoy, 42 per cent. in England, 43 per cent. in Holland, 48 per cent. in Prussia, and 50 per cent. in Bavaria. Thus it will be seen that on an average 44 per cent., or nearly *one-half*, of the children under ten years of age die. We can hardly say though that this high rate of mortality is entirely owing to defective hygienic matters in schools; but we do say that a great reduction in this rate would result, and the majority of diseases and physical shortcomings of boys and girls would be avoided, if in schools, the requirements essential to the health of youth were better understood and more widely practised.

However difficult it may be generally, and, of course, also in schools, to prevent some violation of hygienic principles, it is, nevertheless, certain that much might, and certainly should, be done to rectify errors existing, and to substitute, in the place of what is contrary to all that can induce to health, that which may to a great extent modify matters, and render even the school and all its appointments worthy of an establishment for the practising of both a physical as well as a mental education.

Surely hygiene should not be sacrificed to ambition with respect to high mental culture. Surely, everything should not be done at school for the improvement of youth except that which may aid in making the young life robust and vigorous! Three elements of health—air, water, light—must be properly dispensed to boy and girl; there is enough of them for all, both young and old. In our next paper upon the subject we propose treating of these definitely and in a practical way, whilst offering remarks, so far as they affect the purpose of these papers, upon instruction, school-room ventilation, food, sleep, &c.

A BAT, afflicted with blindness, for some time despaired of earning a livelihood, when the happy thought occurred to him to go into business as an oculist. Having advertised freely, and references being kindly permitted to the beetle, the owl, and the mole, it was not long ere he was enabled to retire with an ample fortune.

THE Dean of Bangor has been inveighing against tea-drinking, and in so doing has been re-echoing the teachings of physiology and dietetics. Excessive tea-drinking is very common; and amongst the working classes especially, the practice has come to be attended with very serious results in the way of mal-nutrition. Every one should know that tea contains little or no nourishment, while cocoa is a real food. The only persons who can afford to drink a moderate quantity of tea are those whose frames are fed with plenty of nutritious food. The poor spending money on tea, and keeping "the eternal teapot simmering on the hob," are purchasing, not health and strength, but weakness, and laying the foundations of a poverty of body they cannot afford to exhibit. There is no comparison between cocoa and tea as a beverage; and if those who at present take tea and bread as a meal, would replace the tea by cocoa and milk and bread, they would gain thereby a satisfying food, and avoid the evils of indigestion which arise from tea-bibbing as commonly practised.

MEDICAL AND SANITARY EXHIBITION, 1881.—AWARD OF MERIT.—DIABETES. VAN ABBOTT'S GLUTEN BREAD, and all other suitable Foods for Diabetic Patients. Dietary Tables and Price Lists post-free on application. VAN ABBOTT, 5, Princes-street, Cavendish-square, W.—DELICATE CHILDREN AND ADULTS SUFFERING FROM NERVOUS DEPRESSION. VAN ABBOTT'S HYPOPHOSPHITE OF LIME BISCUITS, for Delicate Children, especially those suffering from Deficiency of Bone, Weak Joints, or Debility, and Adults suffering from Nervous Depression. Each Biscuit contains five grains of the Hypophosphite of Lime. "Quite free from disagreeable taste, and taken willingly by Children, and certainly provide an excellent means of administering this valuable compound. Our analysis proves the accuracy of the printed descriptions on the labels of the boxes. The Biscuits were suggested by Mr. W. Adams, of the Orthopædic and Great Northern Hospitals." — *Lancet*, Nov. 4, 1876.—VAN ABBOTT, 5, Princes-street, Cavendish-square.—[ADVT.]

"HOW TO OBTAIN LIGHT FROM COAL GAS," is the title of a small *brochure* by Mr. A. Clarke, 30, Watling-street, London. It may be profitably perused by all consumers of gas, indicating as it does briefly but clearly, the means by which the highest illuminating power may be produced with the least expenditure of gas. The author's theory of the proper method of burning coal gas as an illuminant is summed up in the following observation: "Reduce it to 'a moderately low pressure' before it reaches the point of ignition, where it should be *heated* before being consumed."—[ADVT.]

ST. JOHN AMBULANCE ASSOCIATION.

The Central Executive Committee has just issued its report for the current year submitted at the general assembly of the order of St. John of Jerusalem on St. John's Day. It is stated that last autumn her Majesty the Queen was graciously pleased to become a life member of the association by a donation of £25 to the Shetland Islands Centre, of which Princess Beatrice became president, the Duke of Connaught accepting the like office for the Royal Military College. The number of centres and branches now established at home and abroad amounts to 190, while, in addition, many hundreds of "detached classes" for both sexes have been held in the United Kingdom, the Continent, and colonies, among the more recent foreign centres being Gibraltar, Bombay, and the Victoria Centre, Australia. During the year 9,069 certificates have been awarded, of which 1,139 were to women for the "nursing" course, 3,322 to women for the "first aid" course, and 4,608 to men, making a grand total of at least 70,000 certificates issued since the institution of the association in 1877. At one centre alone (Middlesbrough-on-Tees) 18 classes, numbering 600 pupils, were examined by an examiner during one visit. A noticeable feature in connection with this work, and one that unmistakably indicates its great utility, is the support and co-operation accorded to it by the medical profession, many leading members of which are actively engaged in its extension both at home and abroad. Numerous important meetings have been held in all parts of the country, several of which deserve special mention, such as the presentation of certificates by the Duke of Connaught at the Guildhall, the Lord Mayor presiding; by Princess Christian at Windsor, the Duke and Duchess of Teck at Richmond, by Prince Edward of Saxe-Weimar at Portsmouth, by Countess Spencer at Dublin, and by the Duke of Westminster at Chester. As in previous years, it has been found that those engaged in dangerous occupations, such as colliers, miners, railway employés, factory hands, firemen, &c., show great eagerness in attending the classes, the benefits of which have lately been extended to the police at the naval dockyards, the mercantile marine, and the Metropolitan Fire Brigade. Amongst various items of the year's work, such as the institution of the Egyptian Relief Fund, which culminated in the establishment of the Victoria Hospital at Cairo by Viscountess Strangford, and the formation of a transport department, the report states that by permission of the Commissioner of Works, ambulance stations have been formed at Hyde-park, and litters and *matériel* deposited at the lodges at the Marble Arch and Hyde-park-corner in charge of the police, most of whom have attended the classes. Attention is drawn to an admirable plan, illustrated by diagram, suggested by Lady Brassey, and already carried into effect at Battle and elsewhere, for the grouping of neighbouring villages and outlying districts, as the subsidiary sections of larger centres, and after an interesting statement as to the issue of stores, the value of which for the year has amounted to over £3,000, and an extract from a report to the Home Office by the Inspector of Mines for Lancashire, urging the value of the association's work, an urgent appeal is made in conclusion for increased personal co-operation and pecuniary support to a movement now essentially national in its operation and usefulness.

Figure-Beautifying Corsets.—Every lady should send for illustrated circular of the "Ideal," patented. The only corset regulated to impart any degree of fulness and beauty to thin busts. Prices: 8s. 3d., 10s. 9d., &c.—H. Evans & Bale, 52, Aldermanbury, London.—[Advt.]

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

THE UNSANITARY HOMES OF THE RICH.

By C. F. Wingate.

(From the *North American Review.*)

PART II.

If we critically examine one of the palatial residences on Murray Hill, what do we find? Instead of being spacious, as if the owner liked ample room both for his comfort and to dispense a liberal hospitality, it is long and narrow, as is inevitable from the contracted site. The windows have little, if any, outlook, as the view is shut in by adjacent houses. Each owner seems determined to cover every inch of his land with brick and mortar, leaving only a paved patch some fifteen feet square for a yard, to dry clothes. The bit of grass-plot and grape-arbour, with an occasional fruit or shade tree, formerly in vogue, have gone out of fashion. Rich New Yorkers no longer care for such commonplace things. Their children do not require a play-ground. The family are content with an outlook of bare walls and neighbours' windows. Such yards as may be seen are so shut in as to appear like prison grounds. As the sunlight rarely enters such homes, the long three-deep suites of rooms never seem bright, sweet, or fresh, and there can be no free circulation of air. Such air as does enter the seldom-opened windows is redolent with scents from stables, soot from elevated railroads, vapours from factories, or odours from Hunter's Point refineries; the careful housekeeper therefore closes the windows tightly, and the sole source of air is the furnace register, which is supplied from a leaky cold-air box, filled with cellar-damp and street-dust. When ignited the latter smells like burnt feathers, and on analysis it yields twenty per cent. of organic matter. Yet air of this composition is the chief lung food of nine-tenths of the people of the metropolis. After passing through the furnace registers, it mingles with the vapours from the kitchen and laundry, or with gases from leaky drains or foul plumbing fixtures and the products of combustion from scores of gas-jets, forming what Professor Huxley aptly calls "a stirabout of solid particles," and a poor substitute for nature's atmosphere.

Ventilation is decidedly one of the lost arts, and in most houses there is hardly a pretence of providing it. The sole dependence for fresh air is usually windows and open fireplaces, the latter of which are becoming common. Where flues are provided to carry off foul air, they are so small and so roughly lined as to be of little utility. Ventilating shafts are little better, as they are seldom provided with proper openings at the roof, while the skylights over halls are in hundreds of cases tightly sealed. In a vast majority of houses, the air from the lower floors stagnates in the rooms next the roof, whose occupants are in a constant state of stupor from the impure atmosphere. The increasing prevalence of catarrh and pneumonia is pronounced by many physicians as due to the unwholesome air which our people breathe.

Two thousand years ago, Hippocrates said a dry soil is essential to health. A damp cellar is one of the least desirable features of a dwelling. Yet, Professor Chandler declares that not one house in a hundred, in New York, has a properly-constructed cellar, which explains the large proportion of deaths from consumption, and the prevalence of rheumatism in the metropolis. In the main part of the

occupied portion of Manhattan Island there is no soil drainage. Sewer connections are usually made with tile drains, which are rarely tight, and hence they seriously pollute the soil. There is a lack of ventilation and sunlight in cellars, which are crowded with wood and coal-bins, wine closets, and domestic rubbish. Householders should follow Professor Chandler's advice and inspect their cellars once a month.

In the best houses, the provisions kept in refrigerators are exposed to the chance of contamination when the drip-pipe connects directly with the house-drains. Frequent cases of sickness have been traced to this cause. Water-tanks and cisterns connected with soil-pipes are exposed to like contamination. The space behind the woodwork of basins, sinks, and other fixtures is almost invariably foul. Slop sinks are sources of offensive odours, and all these evils are intensified by the lack of water for flushing purposes, owing to the deficient pressure.

The multiplication of servants, and the lack of responsibility for domestic details, have an important sanitary bearing. In houses which have the largest number of domestics, there is often the least attention given to cleanliness. In one of the worst dwellings I have had occasion to examine, and where a death occurred under peculiarly tragic circumstances, there were nine servants, and if the number had been larger, I fear the whole family would have been carried off. In proof of the correctness of these assertions, I may cite the steady advance in the death-rate of New York City; the statements by official inspectors of the Board of Health of the amount of bad plumbing found everywhere; the evidence of other professional observers, like Colonel Waring, that defects in house drainage are prevalent in the very best houses, "almost without exception"; and the testimony of physicians like Dr. Fordyce Barker, Dr. Willard Parker, Dr. Frank H. Hamilton, and others, based upon wide experience and extensive practice. If other evidence were needed, it might be found in the number of practising physicians in New York City, the drug stores on every corner of the leading thoroughfares, and the large outlay for medical attendance and drugs in most families.

But this state of things is not confined to the metropolis. From Brooklyn, Boston, Philadelphia, Washington, St. Louis, Chicago, Cincinnati, San Francisco, and other cities, large and small, the same story is heard. The trail of the serpent is over them all. Wherever "Jerry" builders, ignorant plumbers, and unscrupulous owners or speculators are found, the same deplorable condition of things exists. In Brooklyn the finest homes on the Heights have been polluted with sewer gas, despite their superb situation overlooking New York Bay and swept by winds from every quarter. At the time of the Rockwell case, in 1879, a dozen houses on Montague-terrace were visited by diseases due to bad plumbing. Few of the houses have any barriers against sewer air. During the extensive epidemic of diphtheria in 1881 defective plumbing was found in the majority of the houses where cases occurred. In Washington the sanitary defects in the White House, which are believed to have contributed to President Garfield's death, are equalled by those in several public buildings, where trapless water-closets, leaky drains, furnaces with polluted air-supply abound. Mr. C. A. Robinson, Inspector of Plumbing of the District of Columbia, records a number of similar evils, many of them in "good houses, some among the finest of the city."

Mr. M. J. Jones would be glad to hear from a few gentlemen willing to join in forming a class for learning the Loisettian System of Memory.—Address, 82, New Park-road, Shrewsbury.—[Advt.]

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

BEAUTY AND HEALTH.

Æsthetical Sanitation. By William White, F.S.A., &c. (London: E. Stanford. 1883.)

Mr. White has collected to form this small volume the papers he contributed to the *British Architect.* He writes forcibly and sensibly regarding many important sanitary topics, and shows how perfect health and beauty may go hand-in-hand in the pathways of life. As an illustration of Mr. White's style and opinions, we quote his words when dealing with ill-fitting shoes:—

The injuries arising from ill-shaped, or tight, or high-heeled boots and shoes, are very serious to the figure and gait, but still more so to the general health, through the manner in which the distortion of the foot, and of its position, acts upon the muscles of the hips and spine.

Most of the cases in the Orthopædic hospitals come under spinal treatment. Even where there is no disease, evil often commences with the first tottering steps of childhood. The child may resent the *tightness* of a shoe and get redress; but suffering soon begins, perhaps unconsciously, through the way in which, by the misfitting of the shoe, the great toe is compressed in the direction of the other toes. The "abductor"—the principal muscle provided for the purpose of drawing it away from them, thus forming a gap between the great toe and the others, and distributing the area of leverage by which the balance of the body is preserved—becomes stretched, and the joint permanently enlarged, creating serious inconvenience, and making steadiness of walk more difficult. The natural instinct by which this defect is remedied is by turning the foot itself inwards. I remember a supposed remedy for this defect being carried out by having the shoes made with pointed toes turning outwards, obviously to the still greater increase of the evil to be remedied. I also well remember that the village shoemaker of my native place, when taking his measures, would ask, "Do ye like 'em to poonish ye a bit?" though, whether you wished it or not, he would infallibly punish you, and then complain of the awkward shape of your feet.

How many are there at the present day whose great toe is not thus 'adducted,' more or less permanently, and the joint enlarged in this manner? Again, facility of balance, upon which gracefulness largely depends, is quite impossible with high or pointed heels. Follow a pair of high heels, and you may observe the wobbling of the ankle, which indicates the undue strain thrown upon the hips and spine. They are also commonly accompanied by the treading down of one side of the foot. Putting the heels upon stilts reduces the power of the lever by which the balance of the body, in an upright position, is preserved; and arching the shoe, to fit the span of the foot, is very much like the shoring up the keystone of an arch to prevent its falling. The barbarity of the Chinese in transforming by pressure the heads and the feet of their infants is well-nigh outdone by the barbarity of the fashion which subjects the growing bodies and feet of the English to such indignity and inconvenience. Young persons, whose constitutions have been injured by such means, are further led to delude themselves into the idea that bands and belts are necessary for the support of their enfeebled frames, in ignorance of the mechanical law that although lateral cinctures may add considerably to the strength of a post or column in a building, and that lateral support may be needed in the case of strains, injury, or weakness of muscle, such pressure takes away from the force of their free and natural tension, torsion, and contraction, and that under continuous pressure the muscle gets a permanent set or indentation which can be recovered only by long and persevering exercise. I have known a lame child improve in his walk and in his general health from the very time when his high stilted boot, which had been provided to make up for his shortened leg, was removed. Gustavus Adolphus cured his ague by the constant and persevering exercise of his muscular system. I have myself witnessed the daily fatigue of an exhausted body gradually

Barnes's Impermeable Opium Poultice, an effective and perfectly safe application for relief in neuralgia, gout, rheumatism, painful swellings, and lumbago. Prices by post 1s. 3d. and 2s. 5d. 1 and 2, Trevor-terrace, Knightsbridge, S.W.—[Advt.]

and entirely disappear under the rational use and exercise of a rational system.

From these extracts it will be seen that Mr. White writes vigorously, and with a firm belief in the justice of the cause he espouses. His remarks on "stooping" will also bear quotation :—

Let us now consider stooping. Many are the parents and many the teachers who still advocate and administer the use of the back-board, whether the old-fashioned straight one, or the more modern elastic form, which is indeed still worse as a remedy for rounded shoulders. The weary hour spent in the vain imitation of a trussed fowl is calculated to produce the very opposite result to that which it is intended to have. If the muscles are reduced by force into a constrained position for any length of time, they lose their elasticity, and the apparent amendment is not healthfully produced. But not even an apparent improvement will be permanently secured. The shoulders being fixed in a backward position, the natural and instinctive tendency of the opposing muscles is to act with yet greater force in a forward direction, thus increasing the evil. As illustrating this prevalent evil, together with its popularly supposed remedy, and comparing this with the true and proper cure, it may be instructive to observe that part of the rational and natural treatment for this defect is the pulling of the arms forward by the teacher or operator. This has to be done with great judgment and care. By this means an active resistance is made which exercises its influence in the reduction of the shoulder-blades to their normal position.

It would be impossible to estimate the amount of unnecessary mutual irritation between parent and child, between teacher and pupil, occasioned merely by the recurring reprimand, "Now, do sit up," "Don't stoop," sharply spoken, without a thought that a knowledge of anatomy, and systematic teaching in the right use of the joints, and especially of these joints, are requisite in order to impart to the child that self-command without which all other such commands must in reality be futile. The lower joint of the neck probably will be left passive, the upper joint having to do double duty, whilst the proper result is simply unattainable without actual training. The poking neck, whether in a girl or boy, may indeed easily arise from so slight a thing as an ill-fitting dress or collar.

This has been called a small volume, and, as regards size, it certainly merits that term. But every page teems with wholesome health-truths, forcibly expressed; and we can, on this account, very cordially recommend Mr. White's pages to the notice of our readers.

A USEFUL COOKERY BOOK.

Cookery for Invalids, Persons of Delicate Digestion, and for Children. By Mary Hooper. (London: Kegan Paul, Trench, & Co.) 1883. Third edition.

We are glad to notice that this useful book has attained its third edition. Its success is thoroughly well deserved. The authoress writes on the principle that "Dr. Diet and Kitchen Physic" are acknowledged "as the best friends of the medical profession." Her subsequent remark, that a doctor has an anxious time of it "when he hands over his patient to the good offices of the cook," is also a highly correct observation. Proper food, properly-cooked food, and tastily-prepared food, given at proper times and in proper quantities, form, in truth, the sheet-anchor of medical treatment in three-fourths of the cases which meet the eye of the doctor. Speaking even of the homely "gruel," in her preface, the authoress says :—

Thus it is that gruel, which in former times was said to "gratify nature" and to be the king of spoon-meats and the queen of soups, and which played so important a part in the sick dietary, has fallen into disrepute. The fact is that in these days few persons know gruel except as manufactured from the starchy preparations, the chief merits of which appear to be that they "can be made in ten minutes"; and it is, therefore, no wonder so much dislike is expressed for it.

The delicious, creamy, nourishing, one may almost say elegant, gruel, made by the hands of our grandmothers for their invalids, is now hardly known among us. It was either made from groats, crushed in the household mortar, or bought specially prepared, and known as "Embden groats," and was in either case admirably suited for the purpose. After many hours' boiling the gruel was carefully strained, and was then ready to be served plain, or flavoured, as the case might require. We can hardly wonder in these days that gruel is so unpopular, being what it is—a "patent" hasty compound manufactured to suit the slovenly and impatient culinary habits of the period—or that doctors have almost ceased to order it as an especially useful and restorative diet.

The present writer well remembers her mother, whilst relating to her the sorrow and distress of the nation at the premature death of the Princess Charlotte of Wales, adding it was reported that the Princess shivered when a basin of gruel was presented to her, as though such antipathy was a measure of the hopelessness of her case. But it is no bad symptom *now* when ladies shiver at the sight of gruel, but rather an indication of a true taste which revolts against impure and badly-prepared articles of diet. Gruel made as it ought to be is rarely disliked, and is more nourishing, and in many cases to be preferred, to arrowroot—an expensive thing, and one most difficult to procure genuine.

One hint of a highly useful kind is given by Miss Hooper in her Preface, namely, that where the invalid's food "cannot be properly supplied from the kitchen, a lady, by the aid of a small gas-stove, can readily prepare it." An equally important remark is that which holds that "'kitchen physic' will never be so efficacious as when the invalid knows it has been prepared by loving hands. The mother, wife, or daughter who trusts these duties to no lower love than her own, will surely receive the dearest reward in the knowledge that the pleasure with which food is eaten enhances its value in every sense."

We quote several of the recipes contained in this useful volume, which should find a place in every home.

Restorative Gruel.—This delicious substitute for groat gruel is made as follows :—One ounce of rice, one ounce of sago, one ounce of pearl barley; put three pints of water, and boil gently for three hours, when the liquor should be reduced to a quart. Strain it in exactly the same manner as groat gruel, and flavour with wine, brandy, or anything else that may be suitable. If made a little thicker, say with an ounce and a half of each ingredient to three pints of water, a jelly will be produced, which may be eaten cold with sugar, fruits, syrups, or preserve.

Rice Cakes.—Mix two ounces of ground rice with six ounces of flour, and one teaspoonful of baking powder, rub in an ounce of fresh butter and two ounces of sugar. Beat up an egg in a quarter of a pint of milk, with a little lemon flavouring, have ready small patty-pans rubbed with butter, half fill each with the cake mixture, put immediately into the oven and bake for fifteen minutes.

Fruit Pudding for Children.—Make a crust in the proportion of four ounces of suet to six of flour, a pinch of salt, and water to make a stiff paste, roll it out thin before putting into a buttered basin, then add the fruit mixed with sugar, except in the case of apples, which are sometimes hardened by boiling with sugar; put on a lid of paste, and boil the pudding an hour and a half. Care should be taken to roll the crust thin, in order to get as much fruit as possible into the pudding. It is a good plan to stew a little fruit, and serve it with the pudding, as it should be given to children in large proportion to the crust.

Egg Drinks.—These are most useful, and may be made in almost endless variety. Beaten up with milk or cream, with wine or brandy, in tea and coffee, as a substitute for milk, eggs are equally useful. For tea or coffee, beat up the yolk of an egg with a little sifted sugar, and a spoonful or two of milk or cream. Pour the tea from the pot on to it, stirring with one hand, and pouring in the liquid with the other. Proceed in the same manner for hot wine or spirit drink. For any cold beverage the white of the egg can be beaten up with the yolk, a little sugar added, and the liquid gradually mixed with the egg. On account of the difficulty of mixing the white of an egg with hot drinks, it is often omitted; but it should be used, whenever possible, as the albumen is very valuable. Curdling will be prevented if the yolk and white are beaten together for five minutes, and care must be taken to have the liquid several degrees below boiling-point, when adding it to the egg.

Beef Jelly.—This is often very useful. It is much better to

"The Money Question Considered." E. W. Allen, 4, Ave Maria Lane, E.C. The money question in connection with the State purchase of Railways. "A small pamphlet full of facts." By post, 1½d.—[Advt.]

prepare it in the following manner, than to subject the meat to such long boiling as will produce sufficient gelatine to set the jelly. Make extract of beef as directed for beef-tea, adding no water and but little, if any, salt. For a quarter of a pint of the extract, soak the eighth of an ounce of Nelson's gelatine in a tablespoonful of cold water, and when sufficiently swelled, boil it until dissolved. When the extract is nearly cold, stir in the gelatine, and when set, it will be ready for use. By using a little ice to facilitate cooling, this beef-jelly may be prepared in less than an hour.

A GUIDE TO HEALTH RESORTS.

Health Resorts and Spas, or Climatic and Hygienic Treatment of Diseases. By Herbert Junius Hardwicke, M.D., F.R.C.S.E., &c. (London: W. H. Allen & Co.) 1883.

This is a handy guide to the principal British and Continental resorts. The leading characteristics of these places are given, and an introductory chapter on the treatment of disease by climate will be found to present a succinct summary of the principles which regulate the selection of a climate wherein an invalid may hope for relief or cure. Information is also appended regarding the use of water in the treatment of disease, and the properties of mineral waters. The work is marked by accuracy, and its handy form is not the least of its recommendations.

Sanitary Appliances, Etc.

The Banner System of Sanitation.—This system of securing our hearths and homes against the unseen but all-powerful intruders, which, in the shape of sewer-gas and other elements, threaten our health and prosperity, deserves the careful attention of all who are interested in the scientific safety of their dwelling-places. The invention of Mr. E. Gregson Banner, C.E., this system is founded on an accurate appreciation of the difficulties which stand in the way of successfully managing the "gases" that are inevitably generated in drains, and on a scientific knowledge of the

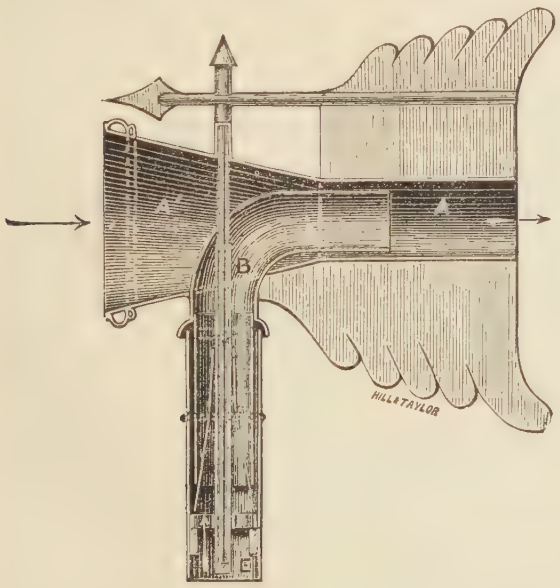


Fig. 1.

principles on which the efficient ventilation of the drains, &c., can be secured. The fight against sewer-gas is an essential part of every sanitary system. Sewer-gas is the medium in which not only typhoid fever, but diphtheria, cholera, dysentery, and other diseases, grow and germinate. It is the soil in which the "germs" of these diseases breed and flourish. Hence, in attacking the problems connected with sewer-gas, and in showing how this enemy of health may be excluded from our homes, Mr. Banner has attacked—and we think has, in one way, solved—one of the chief problems of modern hygiene.

The illustration (Fig. 2) will render clear to all the defective conditions which are only too well known in houses even of the highest class. Here an ordinary pan-closet exists, with all its tendency to generate foulness. The inefficient D-trap is also seen, and the overflow of water from the cistern is shown (as is often the case) to be led directly into the trap, which is a receptacle of sewer-gas. From the trap, goes off the soil-pipe—a closed tube, containing a permanent legacy of foulness in the shape of a column of sewer-gas. Baths and sinks in connection therewith are therefore mere outlets for sewer-gas escapes; and a house thus provided with, as often, as not, basement drains of deficient nature, becomes a permanent harbour of conditions alike fatal to home-happiness and prejudicial to health.

Contrasting with this state of matter, with its filthy pipes coated with sewage matter and receiving no ventilation whatever, the "Banner" system, we see firstly that the soil-pipe becomes a clean

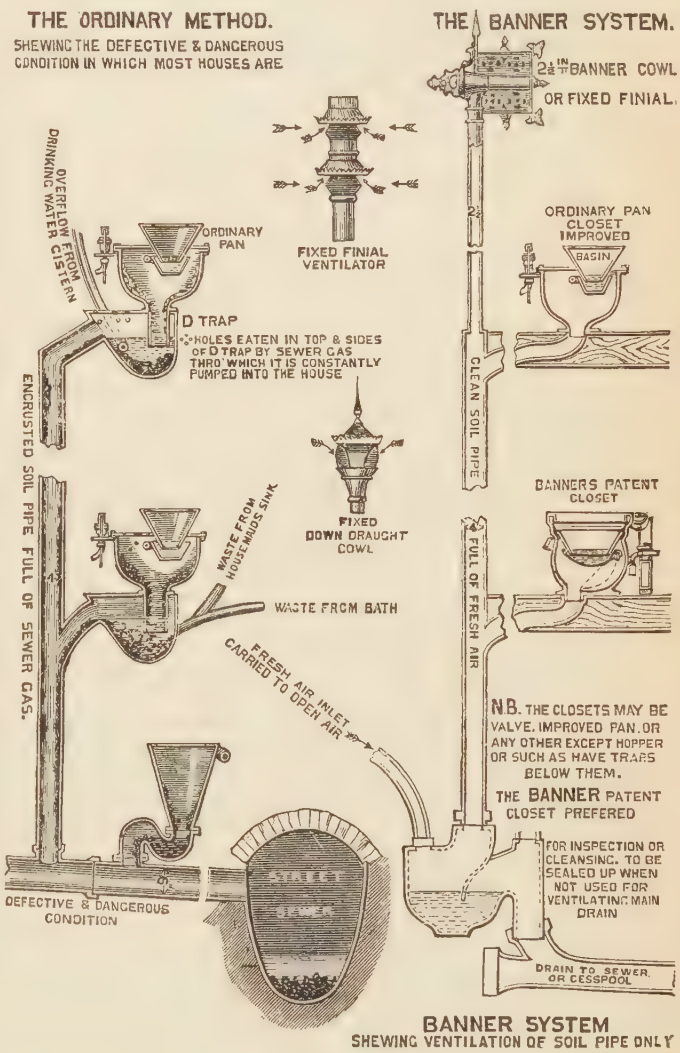

THE ORDINARY METHOD.
SHEWING THE DEFECTIVE & DANGEROUS CONDITION IN WHICH MOST HOUSES ARE
THE BANNER SYSTEM.
2½ IN BANNER COWL
OR FIXED FINIAL.
OVERFLOW FROM DRINKING WATER CISTERN
ORDINARY PAN
FIXED FINIAL VENTILATOR
ORDINARY PAN CLOSET IMPROVED
BASIN
D TRAP
HOLES EATEN IN TOP & SIDES OF D TRAP BY SEWER GAS THRO' WHICH IT IS CONSTANTLY PUMPED INTO THE HOUSE
CLEAN SOIL PIPE
ENCRUSTED SOIL PIPE FULL OF SEWER GAS.
FIXED DOWN DRAUGHT COWL
BANNERS PATENT CLOSET
WASTE FROM HOUSEMAIDS SINK
WASTE FROM BATH
FULL OF FRESH AIR
FRESH AIR INLET CARRIED TO OPEN AIR
N.B. THE CLOSETS MAY BE VALVE, IMPROVED PAN, OR ANY OTHER EXCEPT HOPPER OR SUCH AS HAVE TRAPS BELOW THEM.
THE BANNER PATENT CLOSET PREFERED
FOR INSPECTION OR CLEANSING. TO BE SEALED UP WHEN NOT USED FOR VENTILATING MAIN DRAIN
DEFECTIVE & DANGEROUS CONDITION
DRAIN TO SEWER OR CESSPOOL
BANNER SYSTEM
SHEWING VENTILATION OF SOIL PIPE ONLY

Fig. 2.

wholesome pipe, *full of fresh air*. The old pan closets are replaced by others of new pattern, and constructed on scientific principles. There is plenty of scope for free flushing, and all noxious odours are in this way avoided. The basement trap or syphon has an inspection opening (as shown in Fig. 2) and a "fresh air inlet." Oxygen, Nature's own disinfectant and purifier, is thus everywhere invited to step in and destroy the foulness of drains. The soil-pipe above is furnished with a "Banner Cowl" and with a "fixed finial ventilator" (Fig. 2). A section of "Banner's Rotating Cowl" is shown in Fig. 1, whilst the "finial ventilator" and a "fixed-down draught cowl" are also shown in the illustrations. The object of these cowls is that of actually extracting the foul air, and the ideal

ventilating system, that of replacing foul air by fresh, is thus practically illustrated in the "Banner" apparatus.

All details of this excellent system of house-sanitation—already adopted in many leading hospitals, mansions, offices, &c.—will be cheerfully afforded by Messrs. Banner Brothers & Co., 11, Billiter-square, London, E.C. We must not neglect to mention that this firm manufacture ingenious and efficient sanitary apparatus, to be used in the improvement of our home health. Their "air-tight man-hole covers" for drains, &c., are favourably known all over the world, and the "Banner Patent Closet" is also an example of apparatus which has tended to make the closet-system absolutely safe and free from all inconvenience and trouble. The "Banner traps" are ingenious and effective, and we have been specially pleased with their "grease-trap," which is a necessary addendum to every sink, &c. Their "traps," it may be added, are constructed of "rustless iron."

Altogether, we are of opinion that in Messrs. Banners' appliances, and in their system of sanitation under which these appliances come into use, householders, architects, and others are provided with a means of ensuring "healthy houses" which is second to none. The system richly deserves the encomiums which have been passed upon it by medical men, sanitarians, and architects; and the simplicity of the means used is by no means the least recommendation this system should present to the eyes of the householder.

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 74-76, Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to "The Publisher," at the same address.

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* Editor *and* Publishers *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only. The Editor *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

CHOICE OF SITE FOR DWELLING.

Sir,—Some weeks ago a letter in the *Daily News* from a distracted house-hunter gave rise to a series of correspondence on the somewhat momentous subject of the selection of a "local habitation and a name."

The correspondence afforded a good illustration of the difficulty which many find in making up their minds on this subject, and the dearth of information to be had to assist them in so doing. The crux with many seems to be the choice of a site, and prejudice seems to exist on two points. The one is as to soil, the other as to aspect.

The very mention of clay will close many to any further inquiry. A low position with a stiff clay soil is, no doubt, damp; but there are clays and clays, and a clay soil surely may be a dry one from its nature, as where veins of sand or other pervious soil run through it, or where the position is more or less elevated, with a gradient, so that it is naturally drained. Then as to aspect, a great deal of faith seems to be pinned on some particular aspect, which seems often to be confounded with local position.

The aspect of a site can surely only mean the point of compass towards which the site, if on an incline, faces. For instance, a spot on the north or Solent side of the Isle of Wight, if sloping towards the south, would have a southern aspect, its *position* only in relation to the Island being northern. Such a position is, however, not infrequently referred to as if it indicated the aspect of the spot in question, with all the advantages or disadvantages of such an aspect.

I myself, and I believe many others, would feel grateful for some remarks in your valuable paper on the above subjects.—Your obedient servant, Locus Vivendi.

[We shall shortly devote attention to the points mentioned by our correspondent.—Ed. "H."]

EASY AND SIMPLE DISINFECTION.

Sir,—Allow me to draw the attention of your readers to a very simple means for destroying disease-germs in clothes, either as soon as they are removed from the body, or before they are sent to the wash or laundry. The researches of Tyndall on germs have shown that these animalcules cannot live in a temperature of 212 Fah., *i.e.*, of boiling water. The researches of other experimenters show that if vaccine matter be heated above 150 Fah.—I write from memory—that the lymph will not give rise to vaccination pustules. We also know that thorough boiling will kill trichinæ and other parasites in meat. In the country, in summer, people always boil the milk; they find it keeps longer; it really kills any germs which have fallen in it. The dairymaid also knows from experience that scalding her cans—*i.e.*, killing the germs—allows her milk to keep longer. Preserved meats, &c., are always boiled, and then sealed up whilst hot.

These and other well-known facts are the basis for my theme—*i.e.*, that boiling water is a sure mode of destroying any poison germs clinging to the linen of fever patients. As soon as the body-linen of fever patients is removed, or the bed-linen from typhoid and diphtheria cases, it should be plunged into boiling water, and even boiled for a few minutes to allow the hot water to thoroughly penetrate. This will destroy all the germs, and so prevent the spread of disease. In the same way the stools of fever patients might be received in boiling water, and the germs killed. Curtains, dresses of attendants, &c., might all be put through the process, as it is very simple and does no harm. The water then could be thrown on the ground or down the closet without fear of infection. Thus we have a very simple means for the destruction of fever germs, and which, if carried out, will greatly tend to lessen cases of fever. This simple and easily applied remedy does away at once with carbolic acid and other equally useless things. If newspapers will publish this information in their columns they will do a truly philanthropic work. This information can be put in a few lines, or the whole reasoning might be copied. I have tried it in some cases I had lately, and am pleased with it. The means are always at hand, and can always be procured in a few minutes both in the palace and in the cottage.—Yours truly,

T. R. Allinson, L.R.C.P., &c.

34, Claremont-square, Pentonville, N.,
Oct. 5, 1883.

DRESS REFORM.

Sir,—We unfortunate dress reformers are always being tossed about on the horns of a dilemma, between those who sneer at us for not going far enough and those who scold us for going too far.

To pass from the dress which now pleases the fashionably-educated eye to the one which would adorn the lovely statue of Venus, or the still more lovely living, breathing, moving woman, involves such a change in public opinion, taste, and feeling, that it amounts almost to a revolution. Now, such a revolution cannot be effected in a day.

We can only ask those who are "willing to be convinced," to try and separate true from false opinions as to what beauty in dress consists, and to put aside conventional ideas as to what is modest or immodest in women's dress. The sooner this is done the sooner shall we arrive at that "dress of the future," which shall satisfy all the requirements of health, convenience, and beauty.

The subject is certainly not one which has been "threshed out;" on the contrary, the good seed has only just been sown, and it depends on the enlightenment of all good and true men and women how soon the harvest of reform shall be gathered in.—Yours obediently,

E. M. King,
Hon. Sec. Rational Dress Association.

34, Cornwall-road, Bayswater, W.

P.S.—If "One Willing to be Convinced" will send me his address, I shall be glad to send him copies of my pamphlets, which bear more fully on the points touched upon in his letter.

DISSEMINATION OF SCARLET-FEVER.

Sir,—The following anecdote will show how scarlet-fever is disseminated. About two or three years ago, a teacher of a Methodist Sunday School, who resides in a small Cornish fishing-town of 3,600 inhabitants, was attacked by malignant scarlet-fever. In a few days she died of it. Her funeral was arranged on a public scale and on a Sunday. To prevent any of the children missing the opportunity of doing her memory honour, a general holiday was given to the school, which proceeded corporately to the funeral. It is needless to say that the scarlet-fever spread over the place, and

almost every child that had not had it before, caught it. The death-rate was considerable. Might there not be a law to prevent things like this? No good is done to the dead and much harm to the living by crowded funerals of persons who die from infectious epidemics.—Yours, &c., W. S. L. S.

HEALTHY HOUSES.

SIR,—It may interest your readers to know that the appliances described and illustrated on p. 13 of your paper have been recently fitted in a West-end house, and are acting extremely well, the water-closet especially so. I would recommend Bean's Direct Acting Water-waste Preventing Cistern to be used with it, as it has no valves, and gives a very good flush. The access lid K in your illustration is most valuable, not only for cleansing, but also for making the joint with the soil-pipe from the inside, and it is a great advantage to make it secure from inside as well as out, for this joint is the most important of all.

I would not advise the use of gully traps if possible for wastes, as it is so difficult to wash out all the sediment, &c. Dent & Hellyer's Waste Receivers are far preferable, and, if necessary, perforated zinc grids can be made to fit them should there be any danger of too much sediment passing into the drain. SANITAS.

QUERIES AND ANSWERS.

[We would direct the attention of our correspondents to the fact that, owing to the necessity for sending HEALTH to press early in the week, answers to queries cannot, as a rule, appear in the succeeding number of the journal. Every effort is made to secure punctuality in the replies, but we must ask the occasional indulgence of our readers, owing to the large amount of correspondence, which requires assortment and reply.

We must also request correspondents who write enclosing stamps for copies of HEALTH, to address their inquiries to the Publisher, *and not to the Editor.*]

[Correspondents will please note that Queries addressed on Post-cards are consigned to our waste-paper basket. If information is worth having, it is at least worth a letter.]

GENERAL.

C. CARR.—See our advertising columns for the information you require.

ARMSTRONG.—Communicate, please, directly with the writer of the letter.

CECIL B.—There is a London office, but the headquarters are in New York, we believe.

INTERESTED.—No; there can be no hesitation in declaring that the whole system is a "fraud." If a man sells a "magnetic" or any other belt, which science proves to have no effect whatever on the body beyond giving warmth and support, he is, after the knowledge of what science declares, guilty of a fraud in declaring his belts to be useful from their magnetic properties. We make no charge for testing belts sent us (pre-paid and with stamps for return), and our sole desire is simply to show the public how many so-called "electrical" articles, ranging from belts to brushes, are in reality pieces of inert mechanism, so far as the body and its ailments are concerned. As for "testimonials," can you point out a single case of a scientific electrician who has testified to the genuine nature of any ordinary "magnetic" belt?

BELTON.—See HEALTH No. 25.

AIGBURTH.—Consult your solicitor. The man is a quack. We may mention that the latest "dodge" of many quacks is to associate themselves with some qualified medical man who has so far forgot what is due to the profession as to link himself with shams. The "Medical Register" is the official record of all respectable practitioners, and no man who is not on the register can be held to be in practice or can charge fees. The public have no right to assume any man to be qualified who is not on the "Register."

A. W. CONNOR.—Do you think such an advertisement would be allowed to appear if not genuine? We have every confidence in the system.

MEMORY.—See reply to "A. W. Connor," above.

A. KITCHING.—See list of books on Sanitary Science recommended to "Cathcart," in No. 27 HEALTH. Corfield's "Health," Dr. G. Wilson's "Healthy Dwellings," and Parke's "Hygiene" should suit you well.

SANITARY.

A. N.—1. The "wash out" and the "valve" both good. Bostel's should be seen before deciding. 2. We took our account of the "motor" from the *Times* near the date of the number in which we mentioned it.

G. MAY.—You propose a difficult problem. The only way we can think of solving it is by directing your attention to the paraffin-oil stoves of Rippingille and other makers, to be seen at the ironmongers. Properly used, these stoves give off little or no smell.

W. L.—Lead cisterns may become protected by the minerals of the water. Read our articles (to be found in Monthly Parts I. and II.) on "Water Supply," by Mr. Macadam. In cleaning a lead cistern, no hard brush should be used, as the lead becomes scratched thereby, and is apt to contaminate the water.

PURE WATER (Falkirk).—If we could see that a local movement like yours would be aided by our notice of it in HEALTH, we should be very glad to help you. But it seems to us now, as before, that what you want is the rousing of public opinion, in the face of which no Corporation could possibly force an impure water upon a community. Why not apply to the analysts, who are personally interested in preventing the use of bad water? If they have condemned the proposed supply as impure, no Town Council with any reputation for common sense could introduce such a water. Besides, where are your local editors? The matter is one for local agitation purely; if we can further assist you, we shall be glad to do so, and we will think the matter over. Send us any further particulars.

PURE WATER (Surrey).—It is evident there are two correspondents who have adopted this name. We now reply to yours. An analysis (costing only half-a-guinea as a rule) is the only certain method of water-testing. There is a test for organic impurity in water by adding a drop or two of a solution of permanganate of potass (Condy's "Fluid") to water. If the colour remains clear and purple and unaltered, the water is pure. If, however, the colour of the solution disappears, or turns rusty red, then oxidation of the organic matter is taking place. Well-water is always suspicious, in our opinion, as its liability to contamination is so great. Use a filter (one of the Silicate Carbon Company's, or Maigner's "Filtre Rapide").

MEDICAL.

W. GREEN.—The pamphlet you enclose is that of a quack. We believe this person dubs himself "M.D.," of New York. Be that as it may, he is a quack from his prurient behaviour in distributing such pamphlets; and as he is unregistered (see reply to "Aigburth" above), you had better steer clear of him and all his works. As regards your case, read and follow advice to "Anti-Quack" and "Victor," in No. 26 of HEALTH. Be of good cheer; you are not suffering from any disease, and will soon get well. If not better write again. The "belt" is a fraud.

W. GARTH.—1. The climate is warm and moist; temperature variable, and tends towards relaxation. It might suit a nervous invalid very well, if not too far south for her. 2. No; if there is sufficient glow and reaction the bath will do good. 3. We prefer the remedy prescribed to "Excelsior," HEALTH, No. 18.

TANGIERS.—Try the effects of rest; and occasionally injections of water to which Condy's "Fluid" (one part to ten of water) has been added. A teaspoonful of Fellow's "Syrup of the Hypophosphites" thrice daily, in a wine-glassful of water, should also do you good. You do not name any cause.

PŒNA.—Be comforted; by care and attention to health all will be well. See advice to "W. Green" above. You are highly nervous, without adequate cause, we assure you. Your case is a common one.

W. K. T.—Your teeth should first be seen to. Change your diet completely. Give up tea and coffee, and try cocoa instead. Take milk, soups, puddings, &c., but give up all vegetables. Take also a little of Morson's "Pepsine" with food. Write again if not improved. The pain arises from indigestion.

T. TURNER.—1. No; certainly not. Your case is common and curable. 2. Take the tonic above recommended to "Tangiers." 3. Use cold sponging each morning. 4. The deposit is simply a symptom of overwork or anxiety. Use a nutritious dietary—milk, eggs, puddings, &c.—avoiding constipation. A little pure "Vaseline" applied to the parts will also be found useful. Glad to advise further, if necessary.

EDINENSIS.—A symptom of digestive disturbance. Watch your diet and habits carefully. Abstain from tea and coffee, and make experiments with a view of finding out what agrees with you best. Take a little "Pepsine" with your food.

Fiwick.—See advice to "Edinensis," above, and also to "W. Green" in present number. Keep in mind that what you name is a perfectly natural occurrence in health.

Beta.—Difficult to say without seeing such a case. Why not have a truss made that will keep its place? Your best hope is in such an apparatus, and in exercising all due care afterwards.

Vox Humana.—Yes; communicate with the publishers. Vol. I. will be ready in October, price 7s. 6d. Our monthly parts can be had by ordering of any newsagent or the publishers.

E. J. Ross.—See reply to "Fiwick" above. You suffer from no disease, but only from irregularity, which attention to advice given above should cure. See also reply to "W. Green" in present number.

J. Jackson.—Such symptoms as yours are very common as the result of general indigestion. Send us a fuller account of yourself, food, habits, &c.; and meanwhile try a little "Pepsine" with your food.

Designer.—Take "Æsculap" or "Victoria Offner Bitter Water" every morning for a time, and thus relieve the constipation, to which you owe your trouble. If not relieved, write again.

H. P.—Read our papers on the "Hair," which you will most conveniently find in Monthly Parts I., II., and III. of Health. See that your boots do not compress your ankles; this a common cause of cold feet.

H. M. C. S.—Yes; you suffer from acne. For this try washing the parts at night with soft-soap and flannel, and thereafter use hot soft water. Try Kummerfeld's lotion, consisting of two drachms precipitated sulphur, ten grains camphor, one scruple powdered gum acacia, lime and rose-water of each two ounces. Apply at bed-time, and rub off the sulphur next morning without wetting the skin. Avoid chills, and attend to general health.

D. G.—The inhalation treatment is good. See advice to "W. Scott" in Health, No. 24. Continue your tonics.

Student.—Your symptoms arise either from overwork or from dyspepsia. Take the tonic recommended to "Tangiers" above thrice daily before food. Write again if not improved.

Paracelsus.—Try the effect for a few nights of fifteen grains bromide of potass taken in a wineglassful of water at bed-time, on alternate nights. Such a simple remedy may possibly cure you, but, if not, kindly write again and we shall advise further. There could be no harm in trying one of Pulvermacher's chains applied to the forehead.

Quiver.—See advice to "W. Green" above. Cold sponging, moderate exercise, healthy reading, avoidance of suppers, and of taking fluids late at night will cure you.

F. M. P.—Have no fears for your future. Continue the treatment. Take the tonic recommended to "Tangiers" above, and see also advice to "W. Green."

R. Roberts.—Let us hear how you are after a trial of our advice. Use pure Vaseline as an application to the skin trouble. Try cold sponging and the use of a supporting bandage. Above all, be cheerful in mind.

Neptune.—1. Use pure Vaseline as an application to the lids. Let us know if this cures you. 2. Give up your dinner-tea, and take dinner alone and your tea later on. Occasionally the use of too much tea produces the symptoms of which you complain. The statements in the quack pamphlet you enclose are (as usual) highly coloured, and meant to create alarm.

Box.—You quite mistake the nature of the secretion you name. For the other complaint you mention wear a suspensory bandage. If troublesome consult a hospital surgeon. Use a mineral water (Friedrichshall or Æsculap) in the morning for the correction of your digestive troubles, and for the first-named affection see advice to "Victor" in Health, No. 26.

Inquirer.—Try the remedy recommended to "Paracelsus" above. If not improved, write again.

Highlander.—Not injurious, certainly, if practised in moderation.

S. L.—The person you named we believed to be the author of a book on "Quackery." It is clear we are not speaking of the same person. Give us the person's exact address, and we will tell you at once if he is a qualified medical man. Your former description was not sufficiently clear.

Valjean.—The pamphlet is a tissue of lies from beginning to end—lies, worded so as to play on the nervous fears of ignorant or sensitive persons. These persons should be mentioned to the Liverpool police, to whom we have forwarded their pamphlet. You are not troubled with the affection you name. Try cold sponging, moderate exercise, and be cheerful, avoiding stimulants.

Gratia.—See notice to "W. Green," and take the tonic recommended to "Tangiers," above. Be cheerful, and know that you suffer from no actual disease, but only from a weakness which time and care will mend. Take moderate exercise, but no stimulants.

A Countryman.—From what we have seen of the apparatus you name, we believe it can only act by affording warmth. It has no electrical effects. See Mr. Carpenter's article in Health, No. 20, where his remarks describe all such appliances—of which the name is "legion."

E. Awfurd.—Thanks for the cutting. The Gloucester raid on quacks deserves to be imitated in every town in the kingdom.

A. Waller.—Judge by the skin-reaction. We have never felt that a cold was made worse by the ordinary sponge-bath whenever taken; but we think the plunge-bath should be discontinued in winter. A sponge-bath is safest in your case, with brisk friction thereafter.

Mott.—Depends on the variety. From your description of the treatment ordered, we should say it was not of the more serious variety. Nitrate of silver is not often used now. We should apply glycerine of borax to the sore, and attend to cleanliness simply. Your medical man is the best judge of your case. How long after infection did your ailment appear?

Medicus.—Try a saturated solution of boracic acid. Have you seen recent correspondence in the journals on excessive and fœtid sweating? If not, read the letters. We think in such cases there is a constitutional condition which requires correction by strong tonics. Let us hear how you progress. The sebaceous matter will account for the odour (*e.g.*, as in the ear).

Typo.—We should feel inclined in your case to advise you to attend carefully to warmth, and to avoid stimulants. As a preliminary, try 10 drops *Fer Bravais* in water thrice a-day, and report again in a fortnight.

C. W. J.—You might call and see the electrical bands. Mention by whose advise you do so, and you will receive every information. We think your symptoms are of a somewhat obscure nature; but meantime try the effect of the tonic recommended to "Tangiers," in present number of Health. Glad to advise again, if need be.

Eva.—In your case try the effect for a time of liquid foods alone. Try the "Beef Peptonoids" and Brand's "Beef Essence," alternating them. By such means your stomach may recover its tone. Give up tea and coffee also, and try milk. Take also a little bismuth powder with the meals.

Gardener.—Glad to hear from you again. We think the advice given to "Eva" might benefit you somewhat. The liver is probably congested, but we should not advise you to try strong purgation at all. Slight doses of the water you name ought to do you good. Avoid all vegetable food for a time, andtrt much as possible to *concentrated* beef foods. There can be no objection to your trying the medicine you name. Tea and coffee had better be given up for a time. Command us, if we can assist you further.

S. M. C.—1. The pain is clearly of rheumatic character. Try hot salt bathing along with inunction with warm oil. If not better, write again, and we will aid your further. 2. You have been needlessly alarmed; such books always make non-professional readers nervous. Don't be anxious; there is no relation betwixt the pain and the condition to which you refer. Have no fear for the future; but exercise your own moral control and try the effect of cold sponging, cheerful society, and don't study over-much. You are by all accounts a healthy man, and there is no reason why you should not continue to be so.

J. Joseph.—Symptoms apparently of indigestion. Try Morson's "Pepsine," as directed on the bottle, along with the food. A little more open-air exercise might (taken with caution) be beneficial. Is your nervous system healthy?

Lady Jane.—We know nothing of the remedy you name, and advise you to have nothing to do with it. It sounds like a quack nostrum if it is not one. The pains, &c., to which you refer depend on conditions which can only be cured by consultation with a specialist in the ailments of women. We counsel you to see some such specialist; and if you do not know of any, we shall be glad to send you (by letter) the names of several who make such cases as yours a special study.

L. M. N.—Yes, the mixture is a recognised one; but it should not be taken continuously. Keep up the strength with Brand's "Beef Essence" and the Carnrick's "Beef Peptonoids." As regards the fees, there is no fixed scale of medical charges; medical men in general practice judge of the fee by the circumstances of the patient; and the parish doctor is quite as entitled to his fee of course when attending a private patient as any other independent medical man. The fee is not excessive, inasmuch as medicine was included. The chief concern you should have is to keep up the patient's strength. A little tea (in which there is no nourishment at all, remember) would do no harm.

T. Darte.—You consulted a firm of infamous quacks, who have been figuring of late in the police-courts. Their "belt" is worthless. You suffer from no disease. Take the tonic recommended to "Tangiers," in present number of Health, and practise cold spong-

ing each morning. What you name is a common occurrence in all healthy persons.

Tea.—The prescription you enclose is simply a mild digestive powder, given in cases of acidity. We should recommend you to take a generous dietary, taking a little good claret at meals. Morson's "Pepsine," at meals, would also aid you. The pains you name are indicative of indigestion. Rest after food. Are you closely confined in your business? If so, moderate open-air exercise will do good. If any kidney affection existed, it is hardly likely it would have escaped the notice of the medical men you consulted.

J. F. H.—Try the effect of 15 grains of bromide of potass dissolved in a wineglassful of water, and taken on going to bed. You are simply highly nervous; endeavour to think better of yourself. There is no disease present that we can discover from your statement.

H. F. Talbot.—Use a little "Pepsine" with your food, and try a little good claret along with your meals. Your cure must be mental as well as physical: try to overcome your morbid fears. Glad to be of any further service.

Toujours Loyale.—Your last makes clear to us what you mean. That absorption of carbolic acid may occur is not denied. But it is difficult to say exactly how the symptoms appear. These latter are at the best obscure. In one case we have looked up, there were brain troubles resembling acute mania, and there were also symptoms connected with the kidneys, &c. If you send address we will transmit report of the case to you.

Norvicensis.—It is very surprising to hear that the use of the lotion has turned the colour of the hair. There is no ingredient in it of the nature of a dye. We fancy there must exist some special peculiarity in your case. Give up the lotion and try simply Rowlands' Macassar Oil for a time, dispensing with all other remedies, and let us hear the result. Thanks for your kindly wishes. You might omit the oil from the first-named lotion on p. 135, but try the Macassar Oil first.

Dim Sight.—1. No: constant writing alone would not account for it, but added to weak health the writing might injure the sight. 2. Inject Condy's Fluid (1 part to 10 or 12 water) with your nose-syphon. 3. Eat Bragg's Charcoal Biscuits, and look well to your teeth. The oil will do no harm.

Cardiac.—All the symptoms are those of a digestive disturbance, not of actual organic disease—as, indeed, you were rightly informed. A little weak spirits and water will do you no harm along with food. Give up bathing in winter, and try the tonic recommended to "Tangiers" in present number of Health. You should be perfectly capable of regulating your health wisely. Glad to assist further, if need be. Look well to your digestion, and avoid late suppers.

A Bookbinder.—1. Yes; persevere as you are doing: there are thousands doing as you do, with the best results. The risks of the opposite course are more than enough to deter any one from advising it. Your future step, which we gather is near, will find you strong and well. 2. No medicine required. Simply attend to your health. For the indigestion, try a little Morson's "Pepsine" with food. Nothing more required.

C. H.—1. We believe it is contagious; but only so where a person with the disease *fully developed* is in contact with another. 2. The powders are probably astringent in their nature. The reverend gentleman is a quack of the purest water.

Riminton.—Glad to be of any service to you. The symptoms are likely to be those of worms. Use injections of salt and water; avoid uncooked vegetables, and eat salt with your food. A little Vaseline may be used to allay the itching. Give up tea for a time. Use Bragg's Charcoal Biscuits for the stomach and breath, and try the lime pills ordered to "Caput" in No. 27 Health.

J. F. R.—As absorption is a general matter, and is often rapidly diffused by lymphatics, as well as by veins, your project, whilst ingenious, is hardly feasible. Again, as in snake-bite, no antiseptic or antidote seems to be of service equally in all cases. We prefer Sir Thomas Watson's idea of excision or the actual cautery.

Resurgam.—Don't attribute every trouble in life to the cause you name. We advise cold sponging, sleeping on a hard mattress, cheerful society, and a non-stimulant dietary. Bromide of potass is decidedly lowering if taken constantly and in large doses. At your age society and books and the thousand other aims life presents should surely afford a moral regimen.

Teri, No. 2.—No; not dangerous at all, but often a sign of health, if not too frequent. Certainly not; do not give up the object you had in view. The curse of quacks is that they often embitter, by their fulsome lies, a whole existence.

Glasgow.—You suffer from varicose veins. Keep your feet on a pillow when in bed, so as to favour the return of the blood. Wear an elastic stocking. Avoid standing as much as possible, and see that no constipation exists.

F. W. D.—1. No; a sign of health rather. 2. We do not know anything of the dispensary you name. Send us the names of any of the "officers," and we will tell you if they are registered practitioners.

Undergraduate.—The prescription is a soothing one rather than a tonic. Try Fellow's "Syrup of Hypophosphites" for a time, as prescribed to "Tangiers" in present number of Health. Drink plenty of milk, and take a light, but nutritious, dietary—eggs, puddings, &c. A cold sponge-bath, if you have sufficient reaction, should do good; but your great sheet-anchors are rest and fresh air.

A. S. W.—1. Apply to a chiropodist who has experience in dealing with nail-troubles. There is no cure but a radical one, which a Glasgow chiropodist would apply. 2. Try cod-liver oil emulsion for the cough, with the following:—Carbonate of ammonia, 1 drachm; tincture of squills, 3 drachms; compound tincture of camphor, ½ oz; infusion of senega to make up 6 oz. A tablespoonful every four hours. 3. Glycerine and cream are often used as substitutes for cod-liver oil.

J. H. M.—You may take the mixture plainly and by itself; a little water added, however, will do no harm. You might try the system of inhalation recommended to "W. Scott," in No. 24 Health. You should not take the medicine as frequently as you mention. It is apt to lose effect if so used. Why not try how the mild air of Southport agrees with you? Datura stramonium is preferable; but you should not use this whilst you are taking the mixture.

Cath.—Read our papers on the "Hair," which will be found in the first three monthly parts of Health. You will find depilatories given therein; but only a specialist in skin diseases can apply that most effectual, namely, the electrical method.

W. M. M.—Pamphlet received. Author not on the "Medical Register," 1883, although apparently (from his own statement) a qualified man. The pamphlet is simply a means of unprofessiona publicity.

W. Martin.—Leave off the pomade for a time, and rub in a little Rowlands' Macassar Oil to the roots morning and night. No; don't buy any "Restorers." Let us hear how the oil serves its purpose.

Athlete.—Please state fully what you mean by such "debility." The causes are manifold; but are made much of by quacks, to terrify the ignorant and unwary.

W. F. C.—See advice given to "H. M. C. S." in present number of Health, regarding acne (from which you suffer), and its removal.

Influenza.—Don't sleep with your bed-room window open at bottom. See our "Note by the Way" on Hinckes Bird's plan (Health, No. 26, p. 1). Try what the inhalations recommended to "W. Scott," in Health, No. , will do. Frequently such attacks are only a symptom of general bodily weakness. A trial of cod-oil for a time, in winter, should also be made. Cold sponging (to the chest alone) and brisk friction thereafter, should also aid you.

W. S. M.—1. Constitutional treatment by cod-liver oil, or (the emulsion) to which syrup of iodide of iron has been added. Warm clothing and good food. 2. No "belt" can be of any use in such a case. The gland troubles are only an evidence of constitutional affection.

Scotus.—The pamphlet is that of a filthy London quack, whom we intend to expose shortly. We have sent the pamphlet to the Leith Superintendent of Police. His "Restorer" is a fraud, pure and simple; and as for the "medical men" who testify to the merits of the "Restorer," their names are not in the present "Medical Register."

Melancholia.—No; a little beer will do you no harm. Taken at night it should assist in curing the sleeplessness, for which try 15 grains bromide of potass, in a wine-glassful of water, each alternate night on going to bed. If a tonic is required, try that recommended to "Tangiers" in present number of Health.

New Sub.—No means known of increasing tooth enamel. See our article on "Teeth," in No. 1 of Health. Use precipitated chalk as a dentifrice.

Galvanic.—Conditions all depend probably upon a displacement. You should have no hesitation in applying for medical advice, which alone can restore you to health. Rest assured you will be treated with all delicacy, as such cases are quite common in medical practice.

Diamond.—By all means cultivate regularity in habits of feeding, and you will find the stomach will respond in its turn. It is not necessary to "gorge" the stomach with food, even if three or four meals a day are taken. Each individual should judge for himself and herself the best foods, times, and quantities. See Dr. Swanwick's concluding remarks, Health No. 26, page 6.

A. B. C.—No; no such connection with the secretion you name. Why not apply at a hospital and undergo a thorough examination?

Hopeful (Newport).—Try "Victoria Offner Bitter Water" instead. No need for such a "bath" as you mention. You must find out by experiment the food which suits you best—fruits, &c. The "losses" you name, as likely as not, have nothing to do with your condition.

Lex.—There can be no harm in giving the treatment a trial. Try a saturated solution of boracic acid as an outward application for the perspiring parts.

A. B.—See our remarks on "colds" in "Notes by the Way," No. 27. For the pain, try a little "Pepsine," to be taken along with your food.

Radcliffe.—No; no fear of consumption. You might try cold sponging, if you have sufficient reaction; and gentle tricycle exercise is to be recommended. You might give a trial of the medicine ordered to "X. Y. Z.," in No. 26, Health, page 15.

Singer.—"Granular laryngitis" has no existence, but "granular pharyngitis" is well known. You could not see "granules" in your own larynx. You must have them painted by a surgeon with lunar caustic solution, or with chloride of zinc solution (15 or 20 grains to the ounce of water). Overstrain of voice and general weakness cause this trouble. Rest your voice completely for a time, and take the tonic recommended to "Tangiers," in present number of Health. You must see a medical man. The cautery at a dull red heat is often used in this affection.

Anxious Doe.—Your letter is certainly a long one. We adopt your second suggestion. We do not know the magnetic appliances you name; but if you will forward them to Mr. Carpenter, 36, Craven Park, Harlesden, London, N.W., he will be glad to say whether there is any "virtue" or not in them. The word "magnetic" is suspicious. We have sent him your pamphlets. Repeat your other queries from time to time. We will retain your MSS. to save you writing afresh.

KOLA KOLA KOLA KOLA KOLA KOLA KOLA KOLA KOLA KOLA

KOLA.

What is Kola Nut? Certain CURE for DIPSOMANIA. Will sober a drunken man in half-an-hour. Alcohol will not make you drunk if you eat KOLA. If persevered with removes the craving for strong drink, enables its partaker to undergo long fast and fatigue. Is an appetiser, a tonic, good for all, at any time. See leading article on this wonderful plant in "The Daily Telegraph," Aug. 24th, 1883.

Sold in boxes at 2s. 9d. by

HEYMAN & PHILLIPS,

(DIRECT IMPORTERS,)

15, CLIFFORD ST., BOND ST., W.

OR OF ALL CHEMISTS.

Press Notices and Testimonials Free.

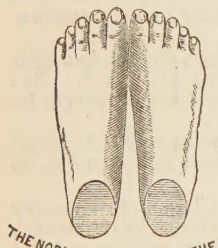
A Physician's Sermon to Young Men. By W. Pratt, M.A., M.D. Fourth Thousand, price 1s.

"The delicate topic is handled wisely, judiciously, and religiously, as well as very plainly."—*The Guardian.*

The Stars and the Earth; or, Thoughts on Time, Space, and Eternity. Revised and enlarged, with Notes by R. A. Proctor, B.A. Fourteenth Thousand, price 1s.

"With such a charming little work we can imagine and completely understand the universe as the work of a single Creator."—*Knowledge.*

London: BAILLIÈRE, TINDALL, & COX, 20, King William-street, Strand.

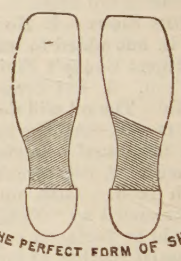


THE NORMAL CONDITION OF THE FOOT

DOWIE & MARSHALL'S BOOTS AND SHOES

Were awarded a Silver Medal at The NATIONAL HEALTH SOCIETY'S recent Exhibition in London.

They also gained a Silver Medal at the Exhibition of Rational Dress at Princes' Hall.



THE PERFECT FORM OF SHOES

BOYS AND GIRLS HOME FOR THE HOLIDAYS.

Goods for the Little Folks are kept in stock in every size and kind, and being made to the shape of the feet, and not according to the fashion of the day, they preserve the feet in the shape ordained by nature.

GENTLEMEN'S TOUR BOOTS AND LADIES' TOUR BOOTS, FOR THE HOLIDAYS,

Are kept of every size in stock. These can be worn with perfect ease the first time of putting on. Being made to the shape of the feet there is never any cramped feeling; the feet never tire any more than they would if no boots at all were worn.

MODERATE PRICES FOR CASH. PRICE LIST GRATIS.

Send Outlines of Feet and an Old Boot, the older the better.

DOWIE & MARSHALL, 455, West Strand (opposite Grand Hotel), London.

(ESTABLISHED 59 YEARS.)

DOWN QUILTS.

AT WHOLESALE PRICES. CARRIAGE FREE.

Messrs. Newham & Co. were favoured last season with many applications for Down Goods, and gave Great Satisfaction to the Public with their celebrated Quilts, Dressing-Gowns, Skirts, Vests, Chest Protectors, &c., &c., lined throughout with best purified White or Grey Down. Having a large stock of Down, they are able to offer at Low Prices, in fact, to give the Public advantage of Wholesale Terms with Quilts as with Feather Beds.

Two Qualities are made of Down Quilts, one in washable Chintz, with bright scarlet ground, woven in various Designs and Colours. A choice Bedroom Decoration.

Also in splendid close-woven new Sateen, in beautiful and variegated Patterns, designed for the present season. Each Quilt is reversible, and can be used on either side. These goods have a brightness almost equal to Satin.

The following sizes in Chintz and Sateen are now in stock, and will be sent off immediately on receipt of order:—

	£. s. d.
No. 1, 54 inches long by 36 inches broad—13½ feet.	
Chintz, at 8½d. per square foot	0 9 7
Sateen, at 10d. per square foot	0 11 3
No. 2, 5 feet long by 4 feet broad—20 feet.	
Chintz, at 8½d. per square foot	0 14 2
Sateen, at 10d. per square foot	0 16 8
No. 3, 5 feet 6 inches long by 4 feet broad—22 feet.	
Chintz, at 8½d. per square foot	0 15 7
Sateen, at 10d. per square foot	0 18 4
No. 4, 5 feet 6 inches long by 4 feet 6 inches broad—24 feet 9 inches.	
Chintz, at 8½d. per square foot	0 17 6
Sateen, at 10d. per square foot	1 0 8
No. 5, 5 feet long by 5 feet broad—25 feet.	
Chintz, at 8½d. per square foot	0 17 9
Sateen, at 10d. per square foot	1 0 10
No. 6, 6 feet long by 4 feet 6 inches broad—27 feet.	
Chintz, at 8½d. per square foot	0 19 2
Sateen, at 10d. per square foot	1 2 6
No. 7, 5 feet 6 inches long by 5 feet broad—27 feet 6 inches.	
Chintz, at 8½d. per square foot	0 19 6
Sateen, at 10d. per square foot	1 2 11
No. 8, 5 feet long by 6 feet broad—30 feet.	
Chintz, at 8½d. per square foot	1 1 3
Sateen, at 10d. per square foot	1 5 0
No. 9, 5 feet long by 4 feet 6 inches broad—22 feet 6 inches.	
Chintz, at 8½d. per square foot	0 15 11
Sateen, at 10d. per square foot	0 18 9

All orders must be accompanied by Cheque or P.O.O. made payable to Messrs. Newham & Co., Feather Purifiers, Boston, Lincolnshire, which, to ensure safe delivery of Goods, may be post-dated ten days. Feathers only 9d. per lb. The trade supplied. Please mention this paper.